

AN ANALYSIS  
*of the*  
FISCAL OPERATIONS  
*of the*  
SCHOOL DISTRICTS  
*of the*  
COMMONWEALTH OF PENNSYLVANIA  
1920-1942



*A Report to*

THE JOINT STATE GOVERNMENT COMMISSION  
(OF THE GENERAL ASSEMBLY)

*by its*

COMMITTEE ON CONTINUATION  
OF THE TAX STUDY

REPORT No. 6  
JUNE 21, 1944

CAPITOL BUILDING  
HARRISBURG, PA.



# JOINT STATE GOVERNMENT COMMISSION

OF

## THE GENERAL ASSEMBLY

(Created in 1937, P. L. 2460, as last amended 1943, P. L. 13)

"A continuing agency of the General Assembly to undertake studies and develop facts, information and data on all phases of government for the use of the General Assembly and Departments and Agencies of the State Government."

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## LETTER OF TRANSMITTAL

To the Members of the Joint State Government Commission of the  
General Assembly of Pennsylvania:

Under authority of the Act of July 1, 1937, P. L. 2460 (Act creating Joint State Government Commission), as last amended by the Act of March 8, 1943, P. L. 13, we submit herewith a Report covering twenty-three years of the Fiscal Operations of the School Districts of the Commonwealth of Pennsylvania.

LLOYD H. WOOD, *Chairman,*  
*Committee on Continuation*  
*of the Tax Study.*

June 21, 1944

## FOREWORD

This is the sixth of a series of studies of the costs of government in Pennsylvania, and its political subdivisions, being made by the Joint State Government Commission, appointed at the 1943 session of the General Assembly. These studies and surveys are directed by the Commission's Committee on Continuation of the Tax Study, which is gathering factual data to be used as the basis of recommendations to the 1945 General Assembly, for revision of the tax structure of the Commonwealth's General Fund. Reports made to date cover the Fiscal Operations and Debt of the Commonwealth, of the School Districts of Philadelphia, Pittsburgh, Scranton and Eleven Selected School Districts. The final report on the subject of schools will deal with the history of education in Pennsylvania, public expenditures from all sources for education in the Commonwealth comparing such expenditures with outlays for similar purposes in comparable states. It also contains a complete analysis of appropriations made by the General Assembly for educational purposes from 1921 to 1945.

This particular report covers the combined fiscal operations of all school districts in the Commonwealth for the period, 1920 to 1942, the last year for which full information is available. It includes a comprehensive analysis of state and federal relations to education in the Commonwealth over the 23 year period, thus giving a summary of over-all revenues, expenditures, and debts of these important political subdivisions of the Commonwealth. This survey should be of vital interest to the thousands of men and women who serve as directors on the twenty-five hundred or more School Boards of the Commonwealth.

The significance of these School District studies is clearly indicated by the fact that in the school year 1941-1942 the total amount disbursed by the 2546 School Boards of the Commonwealth aggregated \$221,450,066, of which \$45,405,097 or 20.5 percent was contributed by the Commonwealth through state grants, \$1,139,050 or 0.5 percent was contributed by the Federal government, and the balance, \$174,905,919 or 79 percent of the total was raised through tax levies, etc. by the individual School Districts for the support of their individual operations.

The school year 1941-1942 is the latest year for which the statistics of total disbursements by all the School Boards of the Commonwealth are available. Assuming that such disbursements for 1943-1944 continued, in all other respects, at the same level as in 1941-1942, the total disbursements for the school year 1943-1944 would be increased by \$12,150,000, which represent additional state funds appropriated by the General Assembly for the purpose of increasing teachers' salaries in all Districts. On this basis, total disbursements by all School Boards for 1943-1944 would be \$233,600,066, of which \$57,555,097 or 24.6 percent would be contributed by the Commonwealth, \$1,139,050 or 0.5 percent by the Federal government, and \$174,905,919 or 74.9 percent by the individual School Districts from local revenues, etc.

These figures for 1943-1944 contrast sharply with those for 1930-1931, when the total amounts disbursed by the School Districts in the Commonwealth aggregated \$215,426,010, of which \$27,278,987 or 12.7 percent was contributed by the Commonwealth, \$452,640 or 0.2 percent by the Federal government, and \$187,694,383 or 87.1 percent by the School Districts.

The total disbursements by all the School Districts of the Commonwealth as given do not include many substantial items of expenditure by other agencies for public school purposes. In addition to State grants, included in the disbursements by the School Districts, the Commonwealth directly contributes large sums for the following purposes: State Share of Teachers' Retirement Fund Contributions, Administrative Costs of the Department of Public Instruction, Salaries

and Expenses of County School Superintendents, and Support of Specialized Schools for the Blind, Deaf, and Dumb, and for Industrial Education, etc.

The Joint State Government Commission, through its Committee on Continuation of the Tax Study, has undertaken the study of the various financial and administrative problems of the Commonwealth. As first stated in its first report on The Debt of the Commonwealth and its Local Subdivisions, dated December 16, 1943, "future studies will deal with trends in expenditures and revenues by functions, departments, and agencies of the Commonwealth, as well as with the growth in the number and burden of taxes during the last decade . . ." Upon completion of this series of studies of the School Districts, the Committee will undertake similar surveys of fiscal operations, debts, and taxes of the other political subdivisions of the Commonwealth—the cities, the counties, the boroughs, and the townships. In due course the Committee will submit a survey of twenty-five years of fiscal operations of the Commonwealth itself.

These various studies will contribute vitally in the development of the essential background and statistical data necessary for a comprehensive understanding of the fiscal affairs of the Commonwealth, upon which the Commission proposes to base its recommendations to the General Assembly for a constructive revision of the entire tax and fiscal structure of the Commonwealth.

The Joint State Government Commission, therefore, is concerned with the over-all costs of government of all the political subdivisions of the Commonwealth, as well as with those of the Commonwealth itself, in the preparation of its recommendations for revision of the tax structure. It is hoped, also, that these various studies will contribute substantially to the permanent records of the Commonwealth. The surveys of this Commission should be distinguished from those of other official agencies relating to the methods of allocation of State revenues to political subdivisions and the practices of these political subdivisions in making their expenditures.

The Committee desires to express its appreciation to Dr. Francis B. Haas, Superintendent of Public Instruction of the Commonwealth, for his generous assistance and cooperation with the Committee.

The Commission and its Committee on Continuation of the Tax Study again express to the Pennsylvania Economy League their great appreciation of the assistance of the technical staff of its Harrisburg office in the development of the factual data for this report.

IRA T. FISS, *Chairman*  
*Joint State Government Commission*

LLOYD H. WOOD, *Chairman*  
*Committee on Continuation of the Tax Study.*

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# FISCAL OPERATIONS OF THE SCHOOL DISTRICTS OF THE COMMONWEALTH OF PENNSYLVANIA 1920-1942

## PART I

### INTRODUCTION

The Commonwealth is divided into school districts which are political subdivisions of the State. These districts are administered by some 2,500 elected Boards of School Directors.<sup>1</sup> The districts are divided into four classifications based on population, as established by the decennial federal census. First class districts consist of those with populations of 500,000 or more; second class those with 30,000 to 500,000 population; third class those with 5,000 to 30,000; and fourth class districts are those with less than 5,000 population. In 1913 there were 2,551 school districts of all classes; they increased to 2,590 in 1920 and then declined slowly to 2,546 in 1942, as shown below:

<b>Classes of School Districts—Selected Years—1913-1942</b>						
School Years	First	Second	Third	Fourth	Total	
1913 .....			Not available			2,551
1920 .....	2	15	187	2,386		2,590
1932 .....	2	20	261	2,302		2,585
1939 .....	2	20	258	2,272		2,552
1941 .....	2	20	258	2,269		2,549
1942 .....	2	20	279	2,245		2,546

Variations in number of districts are caused by creation of new districts and annexation or merger of smaller districts. These factors also cause variances in classifications, but decennial changes in population are the greatest factors affecting the number in each class. The U. S. Bureau of the Census compiles figures every decade, but its compilations are not available until the succeeding year. Since the

<sup>1</sup>Only two are appointed; namely, those of Philadelphia and Pittsburgh, which are the only first class school districts, with Boards of Education appointed by the Courts of Common Pleas of the County in which the district is located.

fiscal year of the districts begins in July, reclassifications are not effected until two years later.

Increases and decreases in number of districts by classes<sup>1</sup> during the period covered by this survey are shown below:

Classes of Districts	SCHOOL YEARS			
	1922	1932	1942	1920-1942
First Class .....	none	none	none	none
Second Class .....	+ 3	+ 2	none	+ 5
Third Class .....	+34	+40	+18	+92
Fourth Class .....	—40	—44	—57	—141
Totals .....	— 3	— 2	—39	—44

The number of first class districts has not changed during the thirty years covered. Second class districts have remained constant since 1932.

## SOURCES OF STATISTICS

Tables of statistical data in the appendix of this survey have been compiled, computed, or correlated mainly from annual reports of the Department of Public Instruction of the Commonwealth. Where data have been secured elsewhere, the source is indicated. Throughout the survey the earliest and the latest figures available are used. Data published by the Department for the period 1913-1919 do not readily lend themselves to analyses of operating expenditures, debt service charges, and capital outlays. These reports are not sufficiently detailed or comprehensive to reflect clearly the sources of funds used to meet these expenditures. However, by careful research and reconciliation, reliable figures of a more general nature have been developed.

The years surveyed throughout the text have been selected as representative years (1) For various economic periods; (2) Reflecting changes in number and character of school attendance; (3) Reflecting high and low points in various trends. The period 1933 to 1941

<sup>1</sup> Every change in classification distorts all statistics compiled for each class. Therefore, such statistics for classes of districts must be interpreted with these reclassifications in mind. In this survey most statistics by classes of districts are limited to the years 1933 to 1941, the latest period without census classification changes to distort the statistics.

was given special attention because in this period there was no census reclassification of districts to distort the statistics.

Fiscal operations of the school system during the thirty years under consideration fall logically into five economic periods. They may be classified as Pre-World War I, 1911-1914;<sup>1</sup> World War I, 1915-1920; Post-World War I Reconstruction, 1921-1930; Post-World War I Depression, 1931-1940; and Recovery, 1941-1944. The years selected for analysis relate to these periods.

Fundamental changes in economic conditions usually affect school district activities one to two years after their effects are reflected in general business conditions. Also, the fiscal year of all districts of the Commonwealth, except those of the first class, begins in July.<sup>2</sup> Consequently, economic changes are not reflected until one or two school years later. The fiscal year of first class districts (Philadelphia and Pittsburgh) are calendar years, with a resulting lag of an additional year. Unless these factors are kept in mind, it is often unfair to draw conclusions from statistical data.

For these reasons the economic periods are related to school years as follows:

Economic Period	School Years
Pre-World War I .....	1913-1916
World War I .....	1917-1922
Post-World War I Reconstruction .....	1923-1932
Post-World War I Depression .....	1933-1942
Recovery .....	1943-

#### IMPORTANT DATES IN SCHOOL ATTENDANCE

Variations in attendance is a vital factor in school finances. Although upsurges in attendance are nearly always followed by increases in operating costs and capital outlays, declines in attendance do not necessarily result in reductions in costs.

Three attendance records were shattered between 1928 and 1940—therefore, three specific years are important in relation to attendance and fiscal operations:

<sup>1</sup> Throughout this study the years are inclusive.

<sup>2</sup> The fiscal year is usually referred to as the "school year." Throughout this study the calendar years in which the school years *end* are used to refer to specific school years.

(1) In 1928 attendance at elementary schools reached an all-time high.

(2) In 1933 combined attendance at both elementary and secondary schools reached an all-time peak; and

(3) In 1940 an all-time high was established for secondary school attendance.

#### **CASH DISBURSEMENTS—ALL DISTRICTS 1913-1942**

For the immediate discussion and analysis in this survey, in order to show total expenditures of the more than twenty-five hundred school boards each year, all disbursements for operating expenditures, capital outlays, and debt service charges are combined below.

However, a word of caution is necessary with respect to these figures representing total disbursements of the school boards. In the first place, the data published by the Department of Public Instruction under debt service charges, do not include substantial deposits from special and pledged taxes in certain years by many of the school districts directly into sinking fund, set up for the redemption of long term bond issues. Consequently, the figures for total cash disbursements are, in fact, lower than actual expenditures. It is not possible, from the published data, to estimate the amount collected from such special or pledged taxes.

In the second place, it must be kept in mind that debt service charges, paid from the general funds, include payments made from time to time to liquidate long term bonds, the proceeds of which are usually expended for capital outlays. Consequently, over the life of any particular bond issue, total disbursements include duplications of payments for the same capital outlay.

In the third place, debt service charges normally include payments for retirement of long term bonds, interest on those bonds, and state tax on loans. In the published data, however, the term debt service charges is used to include payments of principal and interest on short term loans and refunds of taxes and tuition. Since the proceeds of temporary loans are used to pay for items included under operating expenditures, the inclusion of the repayments of these temporary loans

among the total disbursements represents another duplication of disbursements.

With these qualifications, the figures of total disbursements are useful for certain general purposes. For other purposes, in order to avoid the difficulties mentioned above, emphasis throughout this survey will be placed upon operating costs and capital outlays rather than total disbursements.

Over the entire thirty year period all districts combined disbursed \$4.7 billion for all purposes, including school operations, debt service, and capital outlays. Of this sum \$430 million were paid out in seven years, 1913-1919, and the balance, \$4.3 billion, in twenty-three years, 1920-1942. Total cash disbursements for various economic periods are presented below:

<b>Total Disbursements (thousands of dollars)—All Districts—1913-1942</b>				
	Operations	Debt Service	Capital Outlay	Totals
1913-1919 .....		Not available		\$ 429,685
1920-1922 .....	\$ 237,761	\$ 50,064	\$ 37,621	325,446
1923-1932 .....	1,328,274	289,080	311,648	1,929,002
1933-1942 .....	1,520,489	422,977	131,769	2,075,235
Totals 1920-1942	\$3,086,524	\$ 762,121	\$ 481,038	\$4,329,683
Totals 1913-1942		Not available		4,759,368

To finance these disbursements school boards in the aggregate received cash amounting to \$4.8 billion; \$508 million during the period 1913-1919 and the balance, \$4.3 billion from 1920 to 1942. Most of these receipts were from local taxes (collected by the School Boards) and from state grants. Both revenue and non-revenue receipts,<sup>1</sup> for each economic period, are presented in the following table:

<b>Total Cash Receipts (thousands of dollars)—All Districts—1913-1942</b>			
	Revenue	Non-revenue	Totals
1913-1919 .....		Not available	\$ 507,899
1920-1922 .....	\$ 264,618	\$ 66,003	330,621
1923-1932 .....	1,625,536	314,633	1,940,169
1933-1942 .....	1,799,786	271,850	2,071,636
Totals 1920-1942 ....	\$3,689,940	\$ 652,486	\$4,342,426
Totals 1913-1942 ....		Not available	<sup>2</sup> \$4,850,325

<sup>1</sup> Miscellaneous receipts apparently include cash balances carried over from previous years, thus making it appear that there was a surplus of \$75 million of receipts over disbursements between 1913 and 1919.

<sup>2</sup> Non-revenue receipts usually include proceeds of long and short term loans and of sales of properties, and miscellaneous non-recurring receipts.

## TOTAL DISBURSEMENTS AND TOTAL ATTENDANCE—ALL DISTRICTS—1913-1942

While total annual school district disbursements almost quintupled during the period, rising from \$46.6 million in 1913 to \$221.4 million in 1942, an increase of 375%, school attendance only increased 43%, as shown below:

**Total School Attendance (thousands of dollars)—All Districts—1913-1942<sup>1</sup>**

School Years	Elementary	Ratio to 1920	Secondary	Ratio to 1920	Total	Ratio to 1920
1913			Not available		1,074	86.3
1916			Not available		1,212	97.4
1920	1,112	100.0	132	100.0	1,244	100.0
1922	1,275	114.6	173	131.3	1,448	116.4
1928	1,364	122.7	235	177.7	1,599	128.5
1932	1,323	119.0	412	311.6	1,735	139.5
1933	1,270	114.2	507	384.0	1,777	142.8
1940	1,041	93.6	627	474.4	1,668	134.0
1942	956	86.0	582	440.6	1,538	123.6

<sup>1</sup>Data relating to kindergarten pupils were included in elementary attendance data prior to 1930. Therefore, kindergarten pupils are included with elementary schools throughout this survey in comparing annual school attendance.

From 1913 to 1933 disbursements were materially affected by rapid increases in attendance. Elementary schools recorded their highest attendance in 1928 with nearly 1.4 million pupils, compared with 1.1 million in 1920.

Despite a steady decline in elementary attendance after 1928, total attendance reached an all-time high of 1.8 million in 1933, due to increases in high school or secondary attendance. After 1933 came a consistent decline in combined elementary and secondary attendance. In fact, in 1942 total attendance was 13% below 1933.

Increases in disbursements, despite declining over-all attendance after 1933, were due to higher operating and other costs, lower pupil-teacher ratios, and the rise in secondary school attendance, which increased from 235 thousand pupils in 1928 to 582 thousand in 1942, or 147.7%. However, elementary attendance declined from nearly 1.4 million pupils in 1928 to 956 thousand in 1942, or 29.9%, more than offsetting the numerical increase in secondary attendance.

In 1942 the total population of Pennsylvania had increased by 1.18

million people or 13.5% over 1920; total public school attendance had increased by 294 thousand or 23.7% between 1920 and 1942 (when there were 1.538 million pupils); and cash disbursements of all districts increased \$137 million or 161.6% in the period.

## PART II

### TAX RECEIPTS, GRANTS, AND OTHER REVENUE

#### ASSESSED VALUATIONS—BY CLASSES OF DISTRICTS—AND TOTAL —1913-1942

Economic conditions are almost invariably reflected in values of real property used as a basis of taxation by school districts. In 1913 combined assessed valuations of real estate for all districts totaled \$3.8 billion and by 1916 had risen to \$4.0 billion. By 1922 valuations had risen to \$7.0 billion and reached an all-time high of \$10 billion in 1932. After 1932 a continuous decline reduced valuations to \$8.4 billion in 1942, about the same as in 1925.

Due to the effects of decennial reclassifications of districts, it is not feasible to make comparisons of assessed valuations by classes of districts, except those in the first class. Consequently, valuations of second, third, and fourth class districts have been combined and comparisons for selected years are presented in the following table:

**Total Assessed Valuation (millions of dollars)—All Districts—1913-1942**

School Years	First Class	All Other	All Districts	RATIOS TO 1920		
				First Class	All Other	All Districts
1913 .....	Not Reported		\$3,811	Not Reported		59.1
1916 .....	Not Reported		4,045	Not Reported		62.8
1920 .....	\$2,635	\$3,808	6,443	100.0	100.0	100.0
1922 .....	2,962	4,045	7,007	112.4	106.2	108.7
1928 .....	4,478	5,087	9,565	169.9	133.6	148.4
1931 .....	4,617	5,344	9,961	175.2	140.3	154.6
1932 .....	4,681	5,280	9,961	177.6	138.7	154.6
1933 .....	4,663	5,264	9,927	177.0	138.2	154.1
1940 .....	3,627	4,843	8,470	137.6	127.2	131.5
1942 .....	3,533	4,907	8,440	134.1	128.9	131.0

Combined valuations for all districts increased from \$3.8 billion in 1913 to \$8.4 billion in 1942, an increase of 121%. They rose 31% from 1920 to 1942 with an increase of 34% in first class districts and 29% in the combined total of other classes. Valuations for first class



districts rose more rapidly than for other classes to a high point in 1932-1933. Thereafter, decline in valuations of first class districts to 1942 was more rapid than in other classes.

From 1933 to 1941 school districts retained practically the same classifications. Consequently, the most recent trend of valuations for all classes is as follows:

**Total Assessed Valuation (millions of dollars)—By Classes of Districts—1933-1941**

School Years	First	Second	Third	Fourth	Total
1933 .....	4,663	1,594	1,873	1,797	9,927
1934 .....	4,468	1,586	1,868	1,804	9,726
1935 .....	4,253	1,509	1,824	1,736	9,322
1936 .....	4,080	1,485	1,815	1,733	9,113
1937 .....	3,809	1,469	1,805	1,539	8,622
1938 .....	3,740	1,415	1,798	1,706	8,659
1939 .....	3,682	1,417	1,767	1,698	8,564
1940 .....	3,627	1,422	1,808	1,614	8,471
1941 .....	3,570	1,410	1,807	1,669	8,456
Ratio 1941 to 1933 .....	76.5	88.5	96.5	92.9	85.2

During the period 1933-41, first class districts (Philadelphia and Pittsburgh), showed the greatest percentage decrease in valuations, the twenty, second class districts ranked second, while third and fourth class districts ranked fourth and third respectively.

Coincidentally with declines in valuations, total school attendance, which had reached a peak in 1933, also declined. The slump in valuations in third and fourth class districts appears to have reached bottom and leveled off in 1940 and 1941. Despite declines in valuations and attendance during this period, the trend of expenditures for operations and debt service continued upward after a sharp decline in 1933.

There were only three fewer districts in 1942 than in 1941. The number of first and second class districts in 1942 was the same as in 1941, but the number of third class districts increased by 21 and that of the fourth class declined by 24. These shifts in classifications make impossible fair analyses of individual trends in the last two classes. Consequently, valuations and attendance, together with disbursements for operations and debt service of first and second class districts in-

dividually and for third and fourth class districts combined are presented below:

<b>Assessed Valuations (millions of dollars)</b>	1941	1942	Increase (+) or Decrease (-)
First Class .....	3,570	3,533	—\$ 37
Second Class .....	1,410	1,412	+ 2
Third and Fourth Class .....	3,476	3,495	+ 19
<b>Total All Districts .....</b>	<b>8,456</b>	<b>8,440</b>	<b>—\$ 16</b>
<b>School Attendance</b>			
First Class .....	310,035	295,997	— 14,038
Second Class .....	208,457	197,465	— 10,992
Third and Fourth Class .....	1,093,991	1,045,134	— 48,857
<b>Total All Districts .....</b>	<b>1,612,483</b>	<b>1,538,596</b>	<b>— 73,887</b>
<b>Operations and Debt Service (thousands of dollars)</b>			
First Class .....	50,768	53,474	+ 2,706
Second Class .....	31,664	32,099	+ 435
Third and Fourth Class .....	118,178	128,024	+ 9,846
<b>Total All Districts .....</b>	<b>200,610</b>	<b>213,597</b>	<b>+ 12,987</b>

It will be observed that the trends of 1933-1941 continued through 1942, the latest year for which data are available. Too much emphasis cannot be directed to these trends, which reflect further declines in assessed valuations (the tax base) and in school attendance, while the expenditures for operations and debt service continued to increase.

#### **TAXES LEVIED—TOTAL—AND BY CLASSES OF DISTRICTS—1913-42**

Every school district is limited by law in its power to levy and collect taxes on real estate. These levies are expressed in mills or thousandths part of a dollar in statutes authorizing them. First and fourth class school districts have over-all limitations, while second and third class districts do not have such limitations.

The appointed Boards of Education of Philadelphia and Pittsburgh, which are classified as first class districts,<sup>1</sup> are permitted to levy a real estate tax only for the following purposes: (a) the district's share of minimum salaries, increments, and retirement contributions of the certificated teaching and supervisory staff (which is limited by specified

<sup>1</sup> First class districts cannot levy per capita taxes.

pupil-employee ratios); (b) debt service charges; and in addition, (c) not more than 5 mills for all other expenses. The aggregate of these three items may not exceed 11 $\frac{3}{4}$  mills.

The twenty elected Boards of Directors of second class districts are authorized to levy taxes on real estate to cover (a) the district's share of salaries, increments, etc., of the certificated teaching and supervisory staff; and (b) in addition, not more than 20 mills for all other purposes. The 279 third class districts have practically the same tax limitations as second class districts, except that item (b) is limited to 25 mills instead of 20.

Fourth class districts, which were administered by 2,245 elected School Boards in 1942, have the same limitations as third class districts, except for an over-all limitation of 35 mills for all purposes.

All districts, except those of the first class, have power to levy annually on all residents of voting age a per capita tax of not less than one dollar or more than five dollars.<sup>2</sup>

Trend of tax levies in selected years from 1913 to 1942 is shown in the following table:

**Taxes Levied (thousands of dollars)—1913-1942**

School Years	First Class	All Other	All Districts <sup>2</sup>	First Class	All Other	All Districts
1913	Not Reported		\$33,004	Not Reported		52.0
1916	Not Reported		38,634	Not Reported		60.9
1920	\$15,811	\$47,613	63,424	100.0	100.0	100.0
1922	23,696	66,736	90,432	149.9	140.2	142.6
1928	44,776	95,809	140,585	283.2	201.2	221.7
1931	47,344	106,852	154,196	299.4	224.4	243.1
1932	47,089	106,172	153,261	297.8	223.0	241.6
1933	47,072	102,333	149,405	297.7	214.9	235.6
1938	36,297	95,555	131,852	229.6	200.7	207.9
1940	39,161	99,376	138,537	247.7	208.7	218.4
1942	41,258	101,477	142,735	260.9	213.1	225.0

<sup>2</sup>The amounts of taxes levied were not published 1913-1928. Therefore, the amounts shown in table for years prior to 1931 were derived by applying average millage to assessed valuation and did not include tax adjustments.

<sup>1</sup>First class districts cannot levy per capita taxes. Records do not permit analysis of per capita and real estate taxes levied. Per capita tax levies represented 17.8% of the aggregate of taxes levied in nine of eleven districts surveyed in "An Analysis of Fiscal Operations and Debt of Eleven Selected School Districts, 1920-1943," Joint State Government Commission, May 13, 1944.

Taxes levied by all School Boards in 1942 were 2.25 times those levied in 1920. They increased annually after 1913 to an all-time high in 1931, when they were 4.7 times the 1913 levy.

After the peak in 1931, tax levies declined to a low of \$132 million in 1938. This decline occurred during the depth of the depression. After 1938, the trend in tax levies was sharply reversed so that by 1942 they were well on their way to a new high.

To show the latest trend in tax levies for each class of district, the period 1933 to 1941 was selected, for there was no census reclassification of districts during that period. The following table shows tax levies by classes of districts for the years indicated:

<b>Total Tax Levies (thousands of dollars)—By Classes of Districts—1933-1941</b>					
School Years	First	Second	Third	Fourth	Total
1933	47,072	25,654	42,853	33,826	149,405
1934	44,840	23,811	39,765	31,484	139,900
1935	41,297	22,372	39,753	30,975	134,397
1936	40,121	22,219	39,113	30,710	132,163
1937	39,032	23,117	39,873	30,740	132,762
1938	36,297	23,362	40,586	31,607	131,852
1939	35,746	23,867	41,310	32,598	133,521
1940	39,161	23,921	41,625	33,830	138,537
1941	41,678	25,322	41,669	33,495	142,164
Ratio 1941 to					
1933	88.5	98.7	97.2	99.0	95.2

The decline in tax levies, which began in 1932, continued to 1939 in first class districts and in other classes to 1938, when the trend was reversed and, since then, tax levies have been climbing, as indicated.

#### **TOTAL ASSESSED VALUATION AND TAX LEVIES—ALL DISTRICTS—1913-43**

Valuations and millage rates levied on real estate increased 121% and 118%, respectively, from 1913 to 1942, while combined real estate and head tax levies increased 333%. Total valuations reached an all-time high of \$9.9 millions in 1932, a small increase over 1931. During 1931 tax levies reached an all-time high of \$154 million and declined one million dollars in 1932. From 1913 to the peak years of 1931 and 1932, valuations increased 161%, tax levies increased over 364%, and the average millage rate increased about 100%.

The relation of valuations, tax levies, and millage rates for all school districts combined is presented below:

**Valuative—Tax Levies—Millages—All Districts—1913-1942**

School Years	Assessed <sup>1</sup> Valuation (millions)	Taxes <sup>1</sup> Levied (thousands)	Average Millage	RATIO TO 1913		
				Assessed Valuation	Taxes Levied	Average Millage
1913 .....	\$3,811	\$33,004	8.72	100.0	100.0	100.0
1916 .....	4,045	38,634	9.60	106.1	117.1	110.1
1920 .....	6,443	63,424	10.75	169.1	192.2	123.0
1922 .....	7,007	90,432	16.00	183.9	274.0	183.5
1928 .....	9,565	140,586	19.00	251.0	426.0	217.9
1931 .....	9,961	154,196	18.00	261.4	467.2	206.4
1932 .....	9,961	153,261	17.00	261.4	464.4	195.0
1933 .....	9,927	149,405	17.50	260.5	452.7	200.7
1938 .....	8,659	131,852	17.00	227.2	399.5	195.0
1940 .....	8,471	138,537	18.00	222.3	419.8	206.4
1942 .....	8,440	142,735	19.00	221.5	432.5	217.9

<sup>1</sup>Valuations in the table represent the value of real estate on which the millage is levied. The tax levies include both real estate taxes and head taxes combined, except for years prior to 1929, when amount of taxes levied were derived by applying average millage to assessed valuations and did not include tax adjustments.

Valuations, millage rates thereon, and taxes levied for all classes of districts, are presented in the following tables for the period 1933-1941. These years were selected, because no census reclassifications of districts occurred during this period, and consequently, the data are comparable. The table for first and second class districts follows:

School Years	First Class Districts			Second Class Districts		
	Valuation (millions)	Tax Levies (thousands)	Average Millage	Valuation (millions)	Tax Levies (thousands)	Average Millage
1933 .....	\$4,603	\$47,072	10.6	\$1,594	\$25,054	15.7
1934 .....	4,468	44,840	11	1,585	23,811	14
1935 .....	4,254	41,299	10	1,509	22,372	14.5
1936 .....	4,081	40,121	10	1,485	22,219	15
1937 .....	3,809	39,032	10	1,469	23,117	15.5
1938 .....	3,740	36,297	10.25	1,415	23,362	16
1939 .....	3,682	35,746	10.25	1,417	23,867	17.5
1940 .....	3,627	39,161	11.3	1,422	23,921	16.7
1941 .....	3,569	41,678	11.7	1,410	25,322	17
Ratio 1941 to 1933	76.5	88.5	110.4	88.5	98.7	108.3

While valuations and tax levies in first class districts declined 23.5% and 11.5%, respectively, from 1933 to 1941, average millage rates rose 10%. The percentages of decreases in valuations and in tax levies in

second class districts were not as large nor were the percentages of increase in average millages as great as in first class districts.

Even less variation in amounts and rates of change during 1933-41 is apparent in third and fourth class districts, as is shown below:

School Years	Third Class Districts			Fourth Class Districts		
	Valuation (millions)	Tax Levies (thousands)	Average Millage	Valuation (millions)	Tax Levies (thousands)	Average Millage
1933	\$1,873	\$42,853	24	\$1,797	\$33,826	16.8
1934	1,868	39,765	23	1,804	31,484	16
1935	1,824	39,753	22.5	1,736	30,975	17.3
1936	1,815	39,113	22	1,733	30,710	15
1937	1,805	39,873	25.7	1,539	30,740	17.6
1938	1,798	40,586	24	1,706	31,607	17
1939	1,767	41,310	24.3	1,698	32,598	16.8
1940	1,808	41,625	24.2	1,614	33,830	17.3
1941	1,807	41,669	24.6	1,669	33,495	17.4
Ratio 1941 to 1933	96.5	97.2	102.5	92.9	99.0	103.6

Valuations and tax levies in third class districts in 1941 were 96% and 97% respectively, of the 1933 figures, while the average millage was 102%.

Valuations and tax levies by fourth class districts in 1941 were 93% and 99% respectively, of the 1933 figures, while the millage was 104%.

#### TAX RECEIPTS<sup>1</sup>—TOTAL—AND BY CLASSES OF DISTRICTS—1913-42

The most important district revenues were those from real estate and had taxes. The trend in tax receipts is shown below:

School Years	Total Tax Receipts (thousands of dollars)—1913-1942					
	First Class	All Other	All Districts	RATIOS TO 1920		
	First Class	All Other	All Districts	First Class	All Other	All Districts
1913	Not Reported		\$32,517	Not Reported		56.3
1916	Not Reported		38,634	Not Reported		66.9
1920	\$16,470	\$41,271	57,742	100.0	100.0	100.0
1922	23,849	60,164	84,013	144.8	145.8	145.5
1928	40,895	92,133	133,028	248.3	223.2	230.4
1931	44,650	103,017	147,667	271.1	249.6	255.7
1932	43,992	94,829	138,822	267.1	229.8	240.4
1933	42,621	83,816	126,437	258.8	203.1	219.0
1934	40,137	78,482	118,619	243.7	190.2	205.4
1939	34,015	91,458	125,473	206.5	221.6	217.3
1940	38,251	98,292	136,543	232.2	238.2	236.5
1942	42,393	103,024	145,417	257.4	249.6	251.8

<sup>1</sup> These tax receipts include current tax collections, delinquent tax collections, and penalties.

Tax receipts reached an all-time high in 1930-1931 amounting to \$147.6 million. They rose from \$32.5 million in 1913 to \$38.6 million in 1916. A steady rise to \$84.0 million is apparent to 1922. A further steady increase to \$147.6 million was reported for 1931. After a sharp slump to \$118.6 million in 1934, there was an irregular upward trend to \$145.4 million in 1942, an increase over 1913 of 347.2% and of 151.8% over 1920.

Tax receipts for a recent comparable period by classes of districts are shown below:

<b>Total Tax Receipts (thousands of dollars)—By Classes of Districts—1933-1941</b>					
School Years	First	Second	Third	Fourth	Total
1933 .....	\$42,622	\$21,467	\$34,779	\$27,569	\$126,437
1934 .....	40,137	20,002	32,048	26,432	118,619
1935 .....	41,081	20,694	35,174	27,976	124,925
1936 .....	41,808	21,878	36,009	28,476	128,171
1937 .....	40,951	22,976	38,551	30,426	132,904
1938 .....	39,268	23,376	38,240	29,946	130,830
1939 .....	34,015	23,398	37,629	30,432	125,474
1940 .....	38,251	24,126	41,304	32,862	136,543
1941 .....	41,145	25,152	40,967	33,269	140,533
Ratio 1941 to 1933 .....	96.5	117.2	117.8	120.7	111.1

During 1933-1941 tax receipts or collections in all classes of districts were quite irregular, there being two periods of decline and two of increase in nine years. Variations in tax receipts were due to (1) declining valuations, (2) changes in tax rates, and (3) fluctuations in the percentage of tax levies collected.

#### RELATION OF TAX LEVIES AND TAX COLLECTIONS—1913-1942

Tax receipts, as shown in the annual reports from which these data were compiled, include not only amounts collected for the current year's levy, but also all delinquent tax collections and penalties. Therefore, total tax collections may exceed 100% of current levies.

In 1931 both total tax levies and total tax collections reached their peaks and then began to decline irregularly. Receipts declined sharply and reached a low point in 1934, while the decline in levies was not as rapid and did not reach a low point until 1938.

The following table shows total tax levies compared with total tax receipts, for selected years for all districts:

School Years	Tax Levies (thousands)	Collections (thousands)	Percent of Tax Levies
1913 .....	\$33,004	\$32,518	98.5
1916 .....	38,634	38,634 <sup>1</sup>	1
1920 .....	63,424	57,742	91.0
1922 .....	90,432	84,013	92.9
1928 .....	140,586	133,028	94.6
1931 .....	154,196	147,666	95.8
1932 .....	153,261	138,822	90.6
1933 .....	149,405	126,437	84.6
1934 .....	139,900	118,618	84.8
1938 .....	131,852	130,830	99.2
1940 .....	138,537	136,544	98.6
1942 .....	142,735	145,416	101.9

<sup>1</sup> Both current tax levies and tax receipts were reported as identical amounts.

Tax levies, tax receipts, and percentages of tax levies collected for 1933-1941 for first and second class districts are shown in the following tables:

School Years	First Class Districts (thousands of dollars)			Second Class Districts (thousands of dollars)		
	Current Levies	Tax Receipts	Percent <sup>1</sup>	Current Levies	Tax Receipts	Percent <sup>1</sup>
1933 .....	47,072	42,621	90.5	25,654	21,467	83.7
1934 .....	44,841	40,137	89.5	23,811	20,002	84.0
1935 .....	41,297	41,081	99.5	22,372	20,694	92.5
1936 .....	40,121	41,808	104.2	22,219	21,878	98.5
1937 .....	39,032	40,951	104.9	23,117	22,976	99.4
1938 .....	36,297	39,269	108.2	23,362	23,376	100.1
1939 .....	35,746	34,015	95.2	23,867	23,398	98.0
1940 .....	39,161	38,251	97.7	23,921	24,126	100.9
1941 .....	41,678	41,145	98.7	25,322	25,152	99.3
Ratio 1941 to 1933	88.5	96.5	.....	98.7	117.2	.....

<sup>1</sup> Tax receipts as percentages of current tax levies.

First class districts showed much better collection records than other classes during the period. In first class districts they averaged 98.3% of current levies, while second class districts averaged 95%; third class districts 91.3%; and fourth class districts 92.4%.

Tax levies, tax receipts, and percentages of tax levies collected for



third and fourth class districts for 1933-1942 are presented in the following tables:

School Years	Third Class Districts (thousands of dollars)			Fourth Class Districts (thousands of dollars)		
	Current Levies	Tax Receipts	Percent <sup>1</sup>	Current Levies	Tax Receipts	Percent <sup>1</sup>
1933	\$42,853	\$34,779	81.2	\$33,826	\$27,569	81.5
1934	39,765	32,048	80.6	31,484	26,432	84.0
1935	39,753	35,174	88.5	30,975	27,976	90.3
1936	39,113	36,009	92.1	30,710	28,476	92.7
1937	39,873	38,551	96.7	30,740	30,426	99.0
1938	40,586	38,240	94.2	31,607	29,946	94.7
1939	41,310	37,629	91.1	32,598	30,432	93.4
1940	41,625	41,304	99.2	33,830	32,862	97.1
1941	41,669	40,967	98.3	33,495	33,269	99.3
Ratio 1941 to 1933	97.2	117.8	.....	99.0	120.7	.....

<sup>1</sup> Tax receipts as percentages of current tax levies.

The lowest percentages of current tax levies collected in the 1933-1941 period were 80.6% for third class school districts in 1934 and 81.5% for fourth class districts in 1933.

The following analysis of the percentages of tax levies collected reveals the fluctuations in this nine year period for all four classes.

#### Variations in Tax Collections—By Class of Districts—1933 and 1941

Percentage	First Class	Second Class	Third Class	Fourth Class
Over 104% .....	3 years	none	none	none
99% to 104% .....	1	4 years	1 year	2 years
94% to 99% .....	3	2	3	2
89% to 94% .....	2	1	2	3
Under 89% .....	None	2	3	2

During the period, 1933-1941, the year 1938 had the highest percentage of tax collections, when first class school districts collected 108.2% of current levies. Second class school districts were second in the same year with a collection record of 100%. In none of these years did tax collections of either third or fourth class districts reach 100% of current levies, thus accounting for the low average collections of 91.3% for third class and 92.4% for fourth class districts in the period.

A possible explanation of the poor showing made in the third and fourth class districts may be their greater reliance upon State grants

which finance a much larger share of school costs in those districts than in the other classes.

#### SCHOOL DISTRICT GRANTS—1913-41

Combined state and federal grants<sup>1</sup> for instructional purposes rank second to tax collections as a source of revenue of the Commonwealth's school districts. Federal grants for instructional purposes, which are limited to vocational education, amounted in 1941-1942 to only 2.4% of the combined state and federal grants to all districts. Federal grants are deposited in the state treasury for distribution among the districts through the Department of Public Instruction, along with state grants appropriated by the General Assembly. In this survey the terms "grant" or "grants" are used to cover state and federal instructional grants combined, unless otherwise specified. (The formulae and specific amounts relating to these grants are discussed in detail in another section of this survey.)

All grants are distributed among the districts on a "reimbursement" basis. The various School Boards expend the monies required for their respective districts and then apply to the Department for reimbursement due from the state or federal governments according to prescribed formulae.

Total grants to all districts for instructional purposes increased from \$7.0 million in 1913 to \$46.5 in 1942, an increase of 564%. After 1913 grants increased only moderately to \$7.1 million in 1916, then rose to \$12.8 million in 1922, and, thereafter, sharply increased to \$32.6 million in 1932, an increase of 366% over 1913. The over-all trend from 1933-1942 was upwards with total grants amounting to \$36.7 million in 1940 and reaching the all-time high of \$46.5 million in 1942, an increase of 43% over 1932.

The growing importance of instructional grants is evidenced by the following table<sup>2</sup> which, for selected years, shows total current oper-

<sup>1</sup> Federal grants included in this survey do not include subsidies for construction of school buildings, such as P.W.A. grants-in-aid.

<sup>2</sup> This table, prepared and published by the Department of Public Instruction, contains several relatively minor items of state and federal grants which are at variance with reported data. Reconciliation of these variations is not possible from data available.

ating expenditures<sup>1</sup> of all school districts, state grants, and federal grants.

**Grants for Current Operating Expenses<sup>2</sup>—All Districts—1915-1942**

School Years	Amounts (millions)				Percent			
	C.O.E. <sup>3</sup>	State	Federal	Total	C.O.E. <sup>3</sup>	State	Federal	Total
1915 .....	\$33.6	\$7.1	....	\$40.7 <sup>3</sup>	82.6	17.4	....	100.0
1916 .....	36.0	7.1	....	43.1 <sup>3</sup>	83.5	16.5	....	100.0
1920 .....	54.0	10.7	0.1	64.8 <sup>4</sup>	83.3	16.5	0.2	100.0
1922 .....	78.0	12.7	0.2	90.9 <sup>4</sup>	85.8	14.0	0.2	100.0
1928 .....	108.8	24.8	0.4	134.0	81.2	18.5	0.3	100.0
1931 .....	120.1	28.0	0.5	148.6	80.8	18.9	0.3	100.0
1932 .....	118.3	29.8	0.5	148.8	79.7	20.0	0.3	100.0
1933 .....	105.8	30.7	0.5	137.0	77.2	22.4	0.4	100.0
1940 .....	116.3	35.7	1.1	153.1	76.0	23.3	0.7	100.0
1942 .....	112.3	45.4	1.1	158.8	70.7	28.6	0.7	100.0

Ratio 1942 to 1920 208.0 424.3 1100.0 245.1

<sup>1</sup> Tuition payments of one district to another for pupils sent outside their residential districts are eliminated from these figures.

<sup>2</sup> C. O. E.—Total Current Operating Expenditures.

<sup>3</sup> Estimated on basis of 70 per cent of total expenditures.

<sup>4</sup> Tuition not deducted.

In 1915, when total current operating expenses were estimated by the Department of Public Instruction as \$40.7 million, school districts paid 82.6% and the Commonwealth paid 17.4% of such costs. By 1942 current operating expenses, less tuition, rose to \$158.8 million, an increase of 145.1% over 1920. Of this sum the districts absorbed 70.7%; the Commonwealth 28.6%; and the federal government 0.7%.

Grants to first class districts in 1942 were almost three times those made in 1920. Grants to second, third, and fourth class districts (combined) in 1942 were over 4.5 times those made in 1920. There has been no substantial change in the amount of grants to first class districts since 1933, when they amounted to over \$4 million.

Increases from 1920 to 1943 in grants for instructional purposes to second, third, and fourth class districts (combined) were due to payments by the state of a larger share of teachers' salaries in fourth class districts and a greater percentage of reimbursements for transportation costs in third and fourth class districts.

<sup>1</sup> Tuition payments of one district to another for pupils sent outside their residential districts are eliminated from these figures.

A comparison of grants for instructional purposes for first class school districts with the consolidated figures for all other districts, for selected years, is given below:

**Instructional Grants (thousands of dollars)—All Districts—1913-1942**

School Years	First Class	All Other	All Districts	Ratios to 1920		
				First Class	All Other	All Districts
1913	Not Reported		\$7,004	Not Reported		64.6
1916	Not Reported		7,103	Not Reported		65.5
1920	1,360	9,476	10,836	100.0	100.0	100.0
1922	1,911	10,984	12,895	140.5	115.9	119.0
1928	3,619	21,131	24,750	266.1	223.0	228.4
1931	3,691	24,041	27,732	271.4	253.7	255.9
1932	4,270	28,375	32,645	314.0	299.4	301.3
1933	4,031	24,987	29,018	296.4	263.7	267.8
1938	4,078	29,813	33,891	299.9	314.6	312.8
1940	3,977	32,792	36,769	292.4	346.1	339.3
1942	3,891	42,653	46,544	286.1	450.1	429.5

Despite the decline of 19% in school attendance over the years since 1933, the amount of state grants has continued to increase. Had attendance not declined, the amount of state grants would, no doubt, have been much greater for these three classes.

The relation of instructional grants to total tax receipts, for selected years, is shown in the following table:

**Total Tax Receipts and Grants (thousands of dollars)—All Districts—1913-1942**

School Years	Tax Receipts	Grants	Percent <sup>1</sup>	Ratio to 1913	
				Tax Receipts	Grants
1913	32,518	7,004	21.5	100.0	100.0
1916	38,634	7,103	18.4	118.8	101.4
1920	57,742	10,836	18.8	177.6	154.7
1921	74,558	8,850	11.9	229.3	126.4
1922	84,013	12,895	15.3	258.4	184.1
1928	133,028	24,750	18.6	409.1	353.4
1931	147,666	27,732	18.8	454.1	395.9
1932	138,822	32,645	23.5	427.0	466.1
1933	126,437	29,018	23.0	388.8	414.3
1934	118,618	30,634	25.8	364.8	437.4
1935	124,925	26,914	21.5	384.2	384.3
1939	125,474	34,264	27.3	385.9	489.2
1940	136,544	36,769	26.9	419.9	525.0
1942	145,416	46,544	32.0	447.2	664.5

<sup>1</sup> Grants as a percentage of tax receipts.

Between 1913 and 1942 tax receipts increased 347%, reaching their peak in 1931. In the same period grants increased 564%, reaching their peak in 1942. The importance of the above data lies in the increases in grants as percentages of total revenues. The table shows the increasing reliance upon grants, as a source of revenue, in contrast to tax revenues. In 1921 grants represented only 11.9% of tax receipts, whereas in 1942 they represented 32%.

Grants are not paid to the districts until after their disbursements are made. Quite frequently the districts do not receive the grants, or all of them, in the years in which they are due and payable. In fact, while there is regularity with respect to payment of state grants, frequently, appropriations are exhausted before full reimbursements are made or funds are not available in the State Treasury. Consequently, there are carry-overs from year to year of varying amounts due in previous years. While it is quite apparent that grants have risen sharply over the period of years, the specific figures for any particular year are misleading, unless read with this circumstance in mind. In 1941 only 54% of the transportation grants due all districts were paid in that year.

A study of the relationships between tax receipts and grants by districts indicates sharp variations as between districts. These variations are evident in the two tables which follow, covering the period, 1933-1941, when there were no census re-classifications of districts to distort the statistics.

#### Tax Receipts and Grants—By Classes of Districts—1933-1941

School Years	First Class Districts (thousands)			Second Class Districts (thousands)		
	Tax Receipts	Grants	Percent <sup>1</sup>	Tax Receipts	Grants	Percent <sup>1</sup>
1933	\$42,621	\$4,031	9.5	\$21,467	\$3,255	15.2
1934	40,137	4,057	10.1	20,002	3,265	16.3
1935	41,081	2,627	6.4	20,694	2,706	13.1
1936	41,808	5,152	12.3	21,878	3,280	15.0
1937	40,951	3,673	9.0	22,976	4,068	17.7
1938	39,268	4,078	10.4	23,376	3,318	14.2
1939	34,015	3,951	11.6	23,398	3,230	13.8
1940	38,251	3,977	10.4	24,126	3,368	14.0
1941	41,145	3,919	9.5	25,152	2,433	9.7 <sup>2</sup>

<sup>1</sup> Grants as percentages of tax receipts.

<sup>2</sup> Substantial amounts of grants due in 1941 were not paid until 1942.

It will be noted that grants during the period 1933-1941 ranged between 6 and 12% of tax receipts of first class districts, while in second class districts the range was from 9 to 17%.

Tax receipts, grants, and percentages for third and fourth class districts are shown below:

School Years	Third Class Districts (thousands of dollars)			Fourth Class Districts (thousands of dollars)		
	Tax Receipts	Grants	Percent <sup>1</sup>	Grants	Tax Receipts	Percent <sup>2</sup>
1933	34,779	7,237	20.8	27,569	14,495	52.6
1934	32,048	8,043	25.1	26,432	15,270	57.8
1935	35,174	7,812	22.2	27,976	13,769	49.2
1936	36,009	8,914	24.8	28,476	17,777	62.4
1937	38,551	10,230	26.5	30,426	16,813	55.3
1938	38,240	9,443	24.7	29,946	17,051	56.9
1939	37,629	9,663	25.7	30,432	17,419	57.2
1940	41,304	10,284	24.9	32,862	19,139	58.2
1941	40,967	7,692	18.8	33,269	16,601	49.9

<sup>1</sup> Grants as percentages of tax receipts.

During the period 1933-1941 grants for third class districts ranged from 18% to 26% of tax receipts, while in fourth class districts they ranged from 49% to 62%.

## PART III

### OPERATING EXPENDITURES

#### OPERATING EXPENDITURES—ALL DISTRICTS—1920-1942

Total operating expenditures, exclusive of debt service charges and capital outlays, of \$3.0 billion over the period 1920-1942 represented 71.3% of total disbursements of all districts for that period. The following table shows total expenditures for the various items included in operating expenditures for all districts combined from 1920 to 1942.

<b>Operating Expenditures (thousands of dollars)—All Districts—1920-1942</b>				
School Years	1920-1922	1923-1932	1933-1942	1920-1942
Instruction .....	174,854	988,287	1,135,960	2,299,101
Plant Operation and Maintenance ....	35,546	175,637	193,162	404,345
Other Expenses <sup>1</sup> .....	27,361	164,350	191,367	383,078
Total .....	237,761	1,328,274	1,520,489	3,086,524
Average (Annual) ..	79,253	132,827	152,049	134,196
Ratio to 1920-22 ...	100.0	167.6	191.9	169.3

<sup>1</sup> Other expenses of operations include those for general administrative control, auxiliary agencies, and fixed charges, which, in the aggregate, represented 12.4% of total operating expenditures.

The major categories of operation expenditures are cost of instruction and cost of plant operation and maintenance, representing 74.5% and 13.1% respectively of total operating costs of all districts combined.

Average annual operating expenditures more than doubled from 1920 to 1942, following the trend of over-all receipts and over-all disbursements.

Total operating expenditures for first class districts and for other classes combined for selected years from 1920 to 1942 are presented in the following tables:

**Operating Expenditures (thousands of dollars) 1920-1942**

Ratios to 1920

School Years				Ratios to 1920		
	First Class <sup>1</sup>	All Others <sup>2</sup>	Total	First Class	All Other	Total
1920	15,871	48,960	64,831	100.0	100.0	100.0
1922	23,931	66,959	90,890	150.8	136.8	140.2
1928	37,286	101,453	138,739	234.9	207.2	214.0
1932	41,310	113,785	155,095	260.3	232.4	239.2
1933	39,820	103,736	143,556	250.9	211.9	221.4
1934	39,231	99,100	138,331	247.2	202.4	213.4
1935	37,510	100,882	138,392	236.3	206.0	213.5
1938	42,076	115,023	157,099	265.1	234.9	242.3
1940	40,818	120,091	160,909	257.2	245.3	248.2
1942	39,768	128,285	168,053	250.6	262.0	259.2

<sup>1</sup> There are only two—Philadelphia and Pittsburgh.

<sup>2</sup> In 1920 there were 2,588 other districts. In 1942 there were 2,544 other districts.

Operating expenditures in first class districts during 1942 were more than double those of 1920. They rose steadily from \$15.9 million in 1920 to \$41.3 million in 1932, an increase of 160.3%. After a decline to \$37.5 million in 1935, the trend was reversed to reach a peak of \$42 million in 1938, an increase of 165.1% over 1920. Thereafter the trend was gradually downward, dropping to \$39.7 million in 1942, still an increase of 150.6% over 1920.

The upward trend in the combined expenditures for operations of all other districts was not as sharp in the earlier years of the 23 year period as in first class districts, but after 1934 expenditures rose sharply and in every year more than doubled those of 1920. These expenditures rose rapidly from \$49 million in 1920 to \$113.8 million in 1932, an increase of 132.4%. After a decline to \$99.1 million in 1934, the trend was reversed sharply to reach an all-time high of \$128.3 million in 1942, an increase of 162% over 1920.

Total operating expenditures during the period 1933-1941 amounted to \$1.4 billion. Of this sum, first class districts expended \$359.6 million or 26.5%; second class districts \$201 million or 14.9%; third class districts \$379.5 million or 28.1%; and fourth class districts \$412.3 million or 30.5%. Annual expenditures for operations of the various classes of districts during this period are presented in the following tabulation:



**Operating Expenditures (thousands of dollars)—By Classes of Districts—1933-1941**

School Years	First	Second	Third	Fourth	Total
1933 .....	39,820	21,844	39,946	41,946	143,556
1934 .....	39,231	20,170	37,537	41,393	138,331
1935 .....	37,510	20,441	38,518	41,923	138,392
1936 .....	37,527	22,367	40,767	43,910	144,571
1937 .....	41,213	22,692	43,069	45,399	152,373
1938 .....	42,076	23,647	43,915	47,461	157,099
1939 .....	41,156	22,941	43,773	48,267	156,137
1940 .....	40,817	23,292	45,986	50,813	160,908
1941 .....	40,248	23,642	45,974	51,204	161,068
Ratio 1941 to 1933	101.1	108.2	115.1	122.1	112.2

Total expenditures for operations for the period, 1933-1941, were \$161 million in 1941, an increase of 12.2% over 1933. During the same period pupil attendance declined from 1.777 million in 1933 to 1.612 million, a decrease of 9.3%. Expenditures for operations in first class districts during 1941 were 1.1% more than in 1933, while pupil attendance declined 11.3%. During the same period operating expenditures in second class districts increased 8.2%, while pupil attendance declined 11.3%. Operating expenditures in third class districts in 1941 were 15.1% more than in 1920, while pupil attendance declined 10.6%. Fourth class districts' expenditures for operations in 1941 exceeded those of 1933 by 22.1%, while pupil attendance declined 6.3%.

**INSTRUCTION COST—ALL DISTRICTS—1913—1942**

Over the entire period, 1913-1942, the combined expenditures for instruction (a major factor in operating costs) for all school districts amounted to \$2.5 billion. These expenditures between 1913 and 1919 amounted to \$213 million and \$2.3 billion was expended from 1920 through 1942. The amounts expended for instruction during various economic periods are presented in the following table:

**Total Instruction Costs (thousands of dollars)—All Districts—1913-1942**

Years	Amounts	Annual Average	Ratio to 1913-1916
1913-1916 .....	109,658	27,415	100.0
1917-1919 .....	103,085	34,362	125.3
1920-1922 .....	174,854	58,285	212.6
1923-1932 .....	988,287	98,829	360.5
1933-1942 .....	1,135,960	113,596	414.4
1913-1942 .....	2,511,844	83,728	305.4

Between 1913 and 1942 average annual instruction costs for all districts almost quintupled, rising from \$25 million in 1913 to an all-time high of \$123 million in 1942, an increase of 392%.

Instruction costs rose steadily from \$25 million in 1913 to \$117 million in 1932. Then came a gradual decline to \$103 million in 1935, followed by a reverse in trend to reach an all-time high of \$123 million in 1942. Reduced expenditures for the period of 1933-1935 were due principally to a reduction in teachers' salary scales, while the reversal in the later years was due principally to the restoration of teachers' salaries to previous levels.

Total instruction cost figures in the preceding table include tuition paid by certain districts to other districts for pupils attending schools outside of their own residential areas. The result is that total instruction costs and total reported receipts are both inflated by duplications of these tuition payments. The duplicate payments were reported separately for the first time for 1926 as \$4 million and they rose steadily until 1942, when they amounted to \$9 million. In comparison with total instruction expenditures, they are relatively unimportant, representing less than 8% in the year 1942, the year of highest expenditures for instruction.

Increases in total population of the Commonwealth and in child population caused a rise in numbers of pupils attending public schools during the period. This was one factor contributing to increased disbursements for instruction. Other factors will be discussed presently.

The population of the Commonwealth in relation to average daily attendance at public schools for various economic periods, is presented as follows:

**Relation of Population to School Attendance**

School Years	Total Population of Commonwealth—1913-1942		Total Average Daily Attendance <sup>6</sup>	
	Number (thousands)	Ratio to 1913	Number (thousands)	Ratio to 1913
1913 .....	7,665 <sup>1</sup>	100.0	1,074	100.0
1919 .....	8,720 <sup>2</sup>	113.8	1,312	122.1
1922 .....	8,720 <sup>2</sup>	113.8	1,448	134.8
1932 .....	9,631 <sup>3</sup>	125.7	1,735	161.4
1942 .....	9,900 <sup>4</sup>	129.2	1,539	143.3

<sup>1</sup> U. S. Census 1910.  
<sup>2</sup> U. S. Census 1920.  
<sup>3</sup> U. S. Census 1930

<sup>4</sup> U. S. Census 1940  
<sup>6</sup> Includes kindergarten pupils.

From 1910 to 1940 population of the United States increased 43.2%, while population of the Commonwealth increased 29.2%. During a comparable period (1913 to 1942) school attendance in the Commonwealth increased 43.3%. Increase in school attendance exceeded the increase in population, partially because of greater facilities for secondary education and the raising in 1938 of the compulsory school age from sixteen to seventeen years.

The effect of the foregoing is shown in the following table:

**Average Daily Attendance (thousands)—All Districts—1920-1943**

	School Years	Elementary <sup>1</sup>	Secondary	Combined
Earliest Statistics Available . . . . .	1920	1,112	132	1,244
Highest Elementary Attendance . . . .	1928	1,364	235	1,599
Highest Combined Attendance . . . .	1933	1,270	508	1,778
Highest Secondary Attendance . . . .	1940	1,041	627	1,668
Latest Statistics Available . . . . .	1943	911	533	1,444

<sup>1</sup> Includes kindergarten pupils.

Increases in attendance were due largely to a steady increase in the birthrate up to 1921. <sup>2</sup> These increases are reflected in peak attendance in elementary schools in 1928. Although after 1921 the birthrate decreased with a consequent decline in elementary school attendance after 1928, total attendance continued to increase and established an all-time high in 1933. This continued increase was due largely to the rise in numbers of pupils attending secondary schools.

Attendance in secondary schools doubled in the decade 1920-1929. This increase appears remarkable, but the rise was much more remarkable in the next succeeding five years, when attendance quadrupled the 1920 attendance figure. This sharp increase occurred during the depth of the depression, when there was a dearth of opportunity for persons of compulsory school age to find gainful employment and secure exemption from attendance. This condition was further accentuated by the fact that in 1933 attendance in secondary schools increased 95,621 or 23% over 1932. Secondary attendance continued to increase to an all-time high of 627 thousand pupils in 1940, 474% of the 1920 figure. From this point on, secondary attendance declined to 533 thousand pupils in 1943, approximately the

<sup>2</sup> United States statutes, regulating immigration and establishing quotas, passed in 1921, had a substantial adverse effect on the growth of population in Pennsylvania.

same number attending secondary schools a decade earlier. The reduced secondary attendance in 1943, however, was, nevertheless, more than four times the attendance in secondary schools during 1920.

After 1933, the peak year with 1,777 thousand pupils in attendance in elementary and secondary schools, combined attendance declined gradually until 1939, when it was 4% below 1933 and then dropped sharply, due to the war, to 1,444 in 1943, a decrease of 19% from 1933.

Instruction costs in secondary schools in Pennsylvania are higher than those in elementary schools, chiefly because the educational requirements entitle secondary teachers to higher legal minimum salaries. For example, in Philadelphia per pupil costs of education in 1943 were \$184.77 in senior high schools, \$139.16 in junior high schools, and \$104.61 in elementary schools.<sup>1</sup> This was a primary factor in the increase in total expenditures for instruction during the period, for in these years, as has been pointed out, attendance in primary schools fell sharply, while in secondary schools, where per pupil costs are higher, it rose sharply.

Average instruction costs per pupil rose steadily from \$23.48<sup>2</sup> in 1913 to \$64.41 in 1929, *excluding* tuition payments from one district to another. These per pupil costs then declined sharply to \$54.92 in 1935. The trend was then sharply reversed and per pupil instruction costs rose to an all-time high of \$74.52 in 1942, an increase of 37% over the 1935 cost and 217% over 1913.

Another important factor in increased instruction costs was the increase in salary payments to teachers, which in the aggregate amounted to nearly \$2.0 billion during the period 1913-1942, rising from \$22.5 million in 1913 to \$98.1 million in 1942, an increase of 336%.

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<sup>1</sup> See "Fiscal Operations and Debt of the School District of Philadelphia, 1920-1943," p. 28, published by the Joint State Government Commission, May 10, 1944.

<sup>2</sup> Includes tuition payments from one district to another in 1913 which cannot be segregated.

## INSTRUCTION COSTS—BY CLASSES OF DISTRICTS—1920-42

Costs of instruction, with the segregation of the two first class districts from other districts, for selected years from 1920 to 1942 are presented below:

School Years	Costs of Instruction (thou- sands of dollars)			Ratio to 1920		
	First Class	Other Districts	Total	First Class	Other Districts	Total
1920	\$11,862	\$35,221	\$47,083	100.0	100.0	100.0
1922	18,968	48,943	67,911	159.9	139.0	144.2
1928	28,806	74,269	103,075	242.8	210.9	218.9
1931	31,318	84,736	116,054	264.0	240.6	246.5
1932	32,183	85,142	117,325	271.3	241.7	249.2
1933	31,606	78,195	109,801	266.4	222.0	233.2
1935	28,906	74,557	103,463	243.7	211.7	219.7
1938	32,212	84,488	116,700	271.6	239.8	247.9
1940	31,118	88,803	119,921	262.3	252.1	254.7
1942	29,408	94,409	123,817	247.9	268.1	263.0

Instruction costs in first class districts in 1942 were 147.9% over 1920, while these costs in other districts combined increased 168.1%. In first class districts these costs rose rapidly from \$11.9 million in 1920 to \$32.2 million in 1932, an increase of 171.3%. After a decline to \$28.9 million in 1935, the trend was reversed and they rose to a peak of \$32.2 million in 1938 or slightly more than in 1932. Thereafter, a gradual decline reduced instruction costs in first class districts to \$29.4 million.

During the early years of the 23 year period, combined costs of instruction in the other classes of districts did not rise as rapidly as in first class districts. However, they rose from \$35.2 million in 1920 to \$85.1 million in 1932, an increase of 141.7%. After a decline to \$74.6 million in 1935, the trend was reversed and they rose sharply to reach an all-time high of \$94.4 million in 1942, an increase of 168.1% over 1920.

Annual instruction costs in the various classes of districts for the period 1933-1941 are presented in the following table:

**Costs of Instruction (thousands of dollars)—By Classes of Districts—1933-1941**

School Years	First	Second	Third	Fourth	Total
1933	31,606	16,618	29,620	31,957	109,801
1934	30,890	14,913	27,283	31,236	104,322
1935	28,906	15,175	28,004	31,378	103,463
1936	29,064	16,902	29,630	33,013	108,609
1937	31,648	17,063	31,337	33,804	113,852
1938	32,212	17,731	31,702	35,055	116,700
1939	31,561	17,280	31,939	35,631	116,411
1940	31,118	17,604	33,608	37,590	119,920
1941	30,250	17,862	33,352	37,599	119,063
Ratio 1941 to 1933	95.7	107.5	112.6	117.7	108.4

During the period 1933-1941, combined costs of instruction amounted to \$1.012 billion. Instruction costs in first class districts were \$277.2 million or 27.4% of this total, those of second class districts were \$151.1 million or 14.9%, third class districts disbursed \$276.4 million or 27.3%, and fourth class districts spent \$307.2 million or 30.4% of the total during the period. In first class districts the trend of instruction costs was irregularly downward during the period, except for the year 1938 which showed an increase. In 1941 these costs dropped to \$30.2 million, a decrease of 4.3% below 1933.

During the period, 1933-1941, the trend of instruction costs in second class districts was up, rising from \$16.6 in 1933 to \$17.8 in 1941, an increase of 7.5%.

The trends in both third and fourth class districts were also upward. In third class districts instruction costs rose from \$29.6 million in 1933 to \$33.3 million in 1941, an increase of 12.6%. These costs in fourth class districts rose from \$31.9 million in 1933 to \$37.5 million in 1941, an increase of 17.7%.

**TEACHERS' SALARY PAYMENTS—ALL DISTRICTS—1913-1942**

Combined expenditures of all districts for teachers' salaries rose steadily from \$22 million in 1913 to \$94 million in 1932, an increase of 327.3%. Total payments to teachers fell to \$83 million in 1935 and then increased steadily to an all-time high of \$98 million in 1942,

an increase of \$76 million or 345.5% over 1913 and \$4 million or 4.2% over 1932.

It might be expected that the greater numbers of teachers would account for the greater part of this huge increase in annual expenditures for teachers salaries, but this factor accounts for only part of the increase, as is shown in the following table:

**Number of Teachers and Average Salaries—All Districts—1913-1942**

Year	Number	Ratio to 1913	Average Salaries	Ratio to 1913	Pupil-Teacher Ratio
1913	37,956	100.0	\$ 592	100.0	28
1916	42,727	112.6	639	107.9	28
1922	46,367	122.2	1,208	204.1	31
1932	58,204	153.3	1,616	273.0	29
1941	59,415	156.5	1,635	276.2	27
1942	57,875	152.5	1,695	286.3	27

While expenditures for teachers' salaries increased more than 345% in 1942 over 1913, numbers of teachers increased only 52.5%. In the same period the population rose 29%, total attendance rose 43.3%, the pupil-teacher ratio *declined* from 28 to 27, or 3.6%, and the average salary of teachers increased 186.3%.

**TEACHERS' SALARY PAYMENTS—BY CLASSES OF DISTRICTS—1920-1942**

The amounts paid for teachers' salaries in first class districts compared with other districts combined, for selected years, are presented below:

**Teachers' Salary Payments—(thousand of dollars) 1940-1942**  
Ratio to 1920

School Years	First Class	Other Districts	Total	Ratio to 1920		
				First Class	Other Districts	Total
1920	9,821	28,694	38,515	100.0	100.0	100.0
1922	16,370	39,644	56,014	166.7	138.2	145.4
1928	24,884	58,263	83,147	253.4	203.0	215.9
1932	27,730	66,311	94,041	282.4	231.1	244.2
1933	27,501	61,954	89,455	280.0	215.9	232.3
1935	25,171	58,302	83,473	256.3	203.2	216.7
1938	28,057	66,450	94,507	285.7	231.6	245.4
1940	27,394	68,770	96,164	278.9	239.7	249.7
1942	25,808	72,308	98,116	262.8	252.0	254.7

Expenditures for teachers' salaries in first class districts rose more

sharply than the general over-all trend, rising from \$9.8 million in 1920 to \$27.7 million in 1932, an increase of 182.4%. After a decline to \$25.1 million in 1935, they rose rapidly to a peak of \$28 million in 1938, an increase of 185.7% over 1920. Thereafter, the trend was reversed and these expenditures declined to \$25.8 million in 1942, about \$.5 million over 1936, but an increase of 162.8% over 1920.

Expenditures for teachers' salaries in all other districts during 1920-1942 followed the over-all upward trend more consistently than in first class districts. They rose from \$28.7 million in 1920 to \$66.3 million in 1932, an increase of 131.1% and then declined to \$58.3 million in 1935. Thereafter, they increased rapidly to an all-time high of \$72.3 million in 1942, an increase of 152% over 1920 and 9% over 1932.

Except for 1939 and 1941 (when teachers' salary payments were not published in the statistical reports) annual expenditures for teachers' salaries during 1933-1941 for various classes of districts are shown below:

**Teachers' Salaries (thousands of dollars)—By Classes of Districts—1933-1941**

School Years	First	Second	Third	Fourth	Total
1933	27,501	14,603	24,755	22,597	89,456
1934	27,050	13,135	22,983	21,752	84,920
1935	25,171	13,255	23,192	21,855	83,473
1936	25,353	14,827	24,991	23,006	88,177
1937	27,608	14,978	26,277	23,632	92,495
1938	28,057	15,447	26,664	24,339	94,507
1940	27,394	15,480	28,009	25,280	96,163
Ratio 1940 to 1933	99.6	106.0	113.1	111.9	107.5

During the period, 1933-1941, payments for teachers' salaries in first class districts declined to a low point in 1935 and then rose gradually to a peak in 1938. In 1940 they nearly equalled those of 1933, the peak year of attendance, declining only .4% from 1933.

Over the same period the trend of teachers' salary payments in second class districts was steadily upward after 1934 and reached a peak of \$15.4 million in 1940, an increase of 6% over 1933.



After a decline from \$24.7 million in 1933 to \$23 million in 1934 teachers' salary payments in third class districts increased steadily to \$28.0 million in 1940, an increase of 13.1% over 1933.

In 1933 expenditures for teachers' salaries in fourth class districts amounted to \$22.6 million. After a decline to \$21.7 million in 1934 they rose to \$25.2 million in 1940, an increase of 73.5% over 1920 and 11.9% over 1933.

The salary scale of teachers, based on prescribed legal minima, varied sharply among the classes of districts. It was highest in first class districts and lowest in fourth class districts. These differences in rates are significant, when related to expenditures for teachers' salaries. A comparison of the median salaries paid to teachers in elementary, junior high, and other high schools by various classes of districts will serve to indicate the variations among classes of districts.

The median salaries in elementary schools<sup>1</sup> for selected years in the four classes of districts are shown below:

School Years	First	Second	Third <sup>2</sup>	Fourth
1928 .....	2,085	1,628	1,427	892
1932 .....	2,129	1,750	1,454	899
1933 .....	2,155	1,784	1,433	884
1940 .....	2,224	1,859	1,477	1,036
1942 .....	2,229	1,860	1,670	1,443
Ratio 1942 to 1928 .....	106.9	114.3	117.0	161.8

<sup>2</sup> Some third class districts are under District Superintendents and some under County Superintendents. Each group has an individual median salary. The figures in the table represent the higher of the two.

Median salaries of teachers in elementary schools of first class districts were more than double those in fourth class districts in 1928. By 1942 the margin was narrowed to \$786 or 54.5%. The median teacher salary in elementary schools of first class districts rose from \$2,085 in 1928 to \$2,229 in 1942, an increase of 6.9%. In second class districts, median salaries rose from \$1,628 in 1928 to \$1,860 in 1942, an increase of 14.3%. Median salaries in third class districts

<sup>1</sup> Some elementary schools have only grades I-VI, others have grades I-VIII. Each group has an individual median salary. The figures in the table represent the higher of the two.

rose from \$1,427 in 1928 to \$1,670 in 1942, an increase of 17%. There were more substantial increases in the median salary in elementary schools of fourth class districts, which rose from \$892 in 1928 to \$1,443 in 1942, an increase of \$555 or 61.8%.

Median salaries in junior high schools <sup>1</sup> for selected years by classes of districts are as follows:

<b>Median Salaries—Junior High Teachers—By Classes of Districts—1928-1942</b>					
School Years	First	Second	Third	Fourth	
1928 .....	2,316	1,823	1,607	1,424	
1932 .....	2,345	1,796	1,644	1,387	
1933 .....	2,647	2,027	1,570	1,351	
1940 .....	2,710	2,143	1,654	1,304	
1942 .....	2,727	2,186	1,690	1,347	
Ratio 1942 to 1928 .....	117.7	119.9	105.2	94.6	

Median salaries of teachers in junior high schools of first class districts, which in 1928 had been 62.6% higher than those in fourth class districts, more than doubled those of fourth class districts by 1942. The median salary in junior high schools of first class districts rose from \$2,316 in 1928 to \$2,727 in 1942, an increase of 17.7%. In second class districts median salaries rose from \$1,823 in 1928 to \$2,186 in 1942, an increase of 19.9%. In third class districts they rose from \$1,607 in 1928 to \$1,690 in 1942, an increase of 5.2%. Median salaries in fourth class districts did not conform with the rise in other districts, but declined from \$1,424 in 1928 to \$1,347 in 1942, a decrease of 5.4%.

The median salaries in other high schools <sup>2</sup> for selected years by classes of districts are shown below:

<b>Median Salaries—Other High School Teachers—By Classes of Districts—1928-1942</b>					
School Years	First	Second	Third	Fourth	
1928 .....	3,206	2,290	1,794	1,418	
1932 .....	3,276	2,224	1,800	1,383	
1933 .....	3,297	2,212	1,697	1,329	
1940 .....	3,316	2,292	1,870	1,400	
1942 .....	3,276	2,311	1,930	1,373	
Ratio 1942 to 1928 .....	102.2	100.9	107.6	96.8	

<sup>1</sup> Junior high schools in all districts include grades VII to IX. Some are under District Superintendents and some are under County Superintendents. Each grade has an individual median salary. The figures in the table represent the higher of the two.

<sup>2</sup> Other high schools in all districts include grades IX-XII and X-XII. Some of these are under District Superintendents and some are under County Superintendents. Each group has an individual median salary. The figures in the table represent the higher of the two.

In first class districts median salaries of teachers in high schools, other than the junior high, were more than double those of fourth class districts for the period, 1928-1942. In first and second class districts median salaries in these other high schools rose but little between 1928 and 1942. In third class districts, they rose from \$1,794 in 1928 to \$1,930 in 1942, an increase of 7.6%. As in the case of junior high schools, median salaries in other high schools of fourth class districts dropped from \$1,418 in 1928 to \$1,373 in 1942, a decrease of 3.2%.

### INSTRUCTION COSTS AND TEACHERS' SALARY PAYMENTS— ALL DISTRICTS—1913-1942

The importance of teachers' salaries in costs of instruction is shown in the following table which relates the average over-all instruction costs of all districts to teachers' salary payments for the 30 year period, 1913-1942.

#### Instruction Costs and Teachers' Salary Payments—(thousands of dollars)—All Districts—1913-1942

Years	Instruction Costs		Teachers' Salary Payments		
	Amount	Annual Average	Amount <sup>1</sup>	Annual Average	% of Instruction
1913-1916	109,658	27,415	99,298	24,825	90.6
1917-1919	103,085	34,362	95,061	31,687	92.2
1920-1922	174,854	58,285	143,968	47,989	82.3
1923-1932	988,287	98,829	799,026	79,903	80.8
1933-1942	1,135,960	113,596	919,782	91,978	81.0
1913-1942	2,511,844	83,728	2,057,135	68,571	81.9

<sup>1</sup>Excludes salaries of principals, supervisors, etc.

Over the entire 30 year period, 1913-1942, teachers' salary payments represented nearly 82% of instruction costs. Prior to 1920 they comprised over 90% of instruction costs. In later years they rose sharply, but not as sharply as the rise in instruction costs incidental to expansion of various types of special education, such as vocational training, which required sizeable additional outlays for supervision, special supplies, etc. Consequently, expenditures for teachers' salaries dropped to slightly over 80% of total instruction costs for the period, 1920-1942.

The growth of instruction costs in relation to teachers' salary pay-

ments in the two first class districts during the 23 year period, 1920-1942, is shown below:

<b>First Class Districts</b>						
		Instruction Costs (thousands)		Teachers' Salary Payments (thousands)		
Years		Amount	Annual Average	Amount <sup>1</sup>	Annual Average	% of Instruction
1920-1922	.....	\$48,017	\$16,006	\$41,005	\$13,668	85.4
1923-1932	.....	271,192	27,119	234,183	23,418	86.4
1933-1942	.....	306,663	30,666	268,268	26,827	87.5
1920-1942	.....	\$625,872	\$27,212	\$543,456	\$23,629	86.8

<sup>1</sup>Excludes salaries of principals, supervisors, etc.

During the period, 1920-1942, teachers' salary payments in first class districts amounted to \$543 million and were 86.8% of the aggregate instruction costs. They rose from an annual average of \$13.6 million in the period 1920-1922, representing 85.4% of instruction costs, to \$26.8 million in the period 1933-1942, representing 87.5% of instruction costs.

The relation of instruction costs to teachers' salary payments in second class districts for the period, 1920-1942, is shown below:

<b>Second Class Districts</b>						
		Instruction Costs (thousands)		Teachers' Salary Payments (thousands)		
Years		Amount	Annual Average	Amount <sup>1</sup>	Annual Average	% of Instruction
1920-1922	.....	\$ 22,700	\$ 7,567	\$ 18,985	\$ 6,328	83.6
1923-1932	.....	137,735	13,774	116,785	11,678	84.8
1933-1942	.....	169,030	16,903	148,237	14,824	87.7
1920-1942	.....	\$329,465	\$14,325	\$284,005	\$12,348	86.2

<sup>1</sup>Excludes salaries of principals, supervisors, etc.

In second class districts teachers' salary payments, aggregating \$284 million, represented 86.2% of the aggregate of instruction costs of \$329 million for the period 1920-1942. They rose more rapidly in proportion to other costs of instruction and for the 1933-1942 period increased to 87.7% of instruction costs, compared with 83.6% in the 1920-1922 period.

Instruction costs and teachers' salary payments in third class districts for the period, 1920-1942, are shown in the following table:

### Third Class Districts

Years	Instruction Costs (thousands)		Teachers' Salary Payments (thousands)		
	Amount	Annual Average	Amount <sup>1</sup>	Annual Average	% of Instruction
1920-1922	\$ 42,512	\$14,171	\$ 35,210	\$11,737	82.8
1923-1932	260,183	26,018	214,630	21,463	82.5
1933-1942	313,286	31,329	263,766	26,377	84.2
1920-1942	\$615,981	\$26,782	\$513,606	\$22,331	83.4

<sup>1</sup> Excludes salaries of principals, supervisors, etc.

Teachers' salary payments in third class districts did not comprise as large a percentage of instruction costs as in first and second class districts. The relationship, however, follows a similar upward trend in these districts. Teachers' salary payments, aggregating \$514 million over the 23 year period, 1920-1942, were 83.4% of instruction costs, aggregating \$616 million.

The following table shows the relation of teachers' salary payments to instruction costs in fourth class districts for the period, 1920-1942.

### Fourth Class Districts

Years	Instruction Costs (thousands)		Teachers' Salary Payments (thousands)		
	Amount	Annual Average	Amount <sup>1</sup>	Annual Average	% of Instruction
1920-1922	\$ 61,627	\$20,542	\$ 48,769	\$16,256	79.1
1923-1932	319,181	31,918	233,430	23,343	73.1
1933-1942	346,981	34,698	239,511	23,951	69.0
1920-1942	\$727,789	\$31,643	\$521,700	\$22,683	71.7

<sup>1</sup> Excludes salaries of principals, supervisors, etc.

Teachers' salary payments in fourth class districts were not as large a factor in instruction costs as in other classes. During the 23 year period, 1920-1942, instruction costs aggregated \$728 million, of which \$522 million or 71.7% was for teachers' salaries. The trend in the proportion of teachers' salary payments to instruction costs was downward, dropping from 79.1% in the 1920-1922 period to 69% in the 1933-1942 period. The increase in amounts paid for tuition to other districts by various fourth class districts is partly responsible for the decline in the proportion of instruction costs paid for teachers' salaries. Payments for tuition in the fourth class rose from 12% of

instruction costs in the 1923-1932 period to approximately 24% of instruction costs in the 1933-1942 period.

**SCHOOL PLANT OPERATION AND MAINTENANCE COSTS <sup>1</sup>—ALL DISTRICTS—1913-1942**

Over the entire thirty year period expenditures for operation and maintenance of the school plant amounted to over \$482 million as shown below:

**Plant Operation and Maintenance Costs (thousands of dollars)—All Districts—1913-1942**

School Years	Amount	Average	Ratio to 1913-19
1913-1919 .....	78,020	11,146	100.0
1920-1922 .....	35,546	11,849	106.3
1923-1932 .....	175,637	17,564	157.6
1933-1942 .....	193,162	19,316	173.3
1913-1942 .....	482,365	16,079	144.3

Plant operation and maintenance costs followed the general over-all trend of expenditures, more than doubling from 1913 to 1942. They grew steadily from \$8 million in 1913 to \$13 million in 1917. A decline during World War I at the rate of \$1 million per year reduced them to \$10 million in 1920. From that year to 1931 annual expenditures increased steadily to \$19 million. A slight recession occurred in 1933, but expenditures were accelerated thereafter and reached an all-time high of \$22.4 million in 1942, an increase of 178% over 1913 and 112% over 1920. Meanwhile, the reported total book value of the entire public school plant of the Commonwealth increased from \$173 million in 1917 to \$229 million in 1920, an increase of 32% and to \$668 million in 1942, an increase of 286% over 1917.

**PLANT OPERATION AND MAINTENANCE COSTS—BY CLASSES OF DISTRICTS—1913-1942**

Plant operation and maintenance expenditures of first class districts and a combination of these expenditures for all other classes for selected years are presented herewith:

<sup>1</sup>School plant operation and maintenance costs include wages of janitors and other plant employes, costs of fuel, water, light and power, janitors' supplies, upkeep of grounds, repair of buildings, repairs and replacements of furniture and fixtures, etc.

### Expenditures for Operation and Maintenance—1913-1942

		Amounts (thousands of dollars)			Ratios to 1920		
School Years		First Class	Other Districts	Total	First Class	Other Districts	Total
1913	.....	2,981	5,079	8,060	113.6	64.0	76.3
1916	.....	4,565	8,303	12,868	174.0	104.6	121.8
1920	.....	2,624	7,937	10,561	100.0	100.0	100.0
1922	.....	2,978	9,479	12,457	113.5	119.4	118.0
1928	.....	4,656	14,064	18,720	177.5	177.2	177.2
1931	.....	4,715	14,673	19,388	179.7	184.9	183.6
1932	.....	4,945	13,613	18,558	188.4	171.5	175.7
1933	.....	4,344	11,611	15,955	165.6	146.3	151.1
1934	.....	4,247	12,002	16,249	161.9	151.2	153.9
1940	.....	5,593	15,258	20,851	213.2	192.2	197.4
1941	.....	5,970	15,778	21,748	227.5	198.8	205.9
1942	.....	5,818	16,593	22,411	221.7	209.1	212.2

Expenditures for plant operation and maintenance costs in first class districts during 1942 were nearly double those of 1913. After rising from \$2.9 million in 1913 to \$4.5 million in 1916, they declined to \$2.6 million in 1920. Thereafter, the trend was reversed and expenditures reached \$4.9 million in 1932, an increase of 65.9% over 1913 and 88.4% over 1920. After 1932 expenditures dropped to \$4.2 million in 1934. A sharp rise thereafter brought them to a peak of \$5.9 million in 1941, an increase of 100.3% over 1913 and 127.5% over 1920. In 1942 expenditures declined to \$5.8 million, an increase of 95.2% over 1913 and 121.7% over 1920.

In 1942 expenditures for plant operation and maintenance in all other districts combined more than tripled those of 1913. They rose from \$5 million in 1913 to \$14.7 million in 1931, an increase of 188.9%. Thereafter, they declined to \$11.6 million in 1933, but then quickly rose to an all-time high of \$16.6 million in 1942, an increase of 226.7% over 1913 and 109.1% over 1920.

Total expenditures for plant operation and maintenance from 1933 to 1941 amounted to \$170.7 million. First class districts expended \$46.2 million or 27.1% of this total; second class districts \$28.5 million or 16.7%; third class districts \$52.2 million or 30.6%; and fourth class districts \$43.7 million or 25.6%.

Annual plant operation and maintenance expenditures during 1933-1941 for each class of district are shown below:

**Plant Operation and Maintenance Costs (thousands of dollars)—By Classes of Districts—1923-1941**

School Year	First	Second	Third	Fourth	Total
1933	4,344	2,808	4,892	3,911	15,955
1934	4,247	2,791	5,001	4,210	16,249
1935	4,639	2,974	5,279	4,431	17,323
1936	5,034	3,185	5,641	4,646	18,506
1937	5,432	3,279	5,983	4,960	19,654
1938	5,524	3,365	6,241	5,322	20,452
1939	5,412	3,329	6,152	5,119	20,012
1940	5,593	3,346	6,416	5,496	20,851
1941	5,970	3,503	6,638	5,637	21,748
Totals	46,195	28,580	52,243	43,732	170,750

During the period, 1933-1941, these costs rose from \$15.9 million in 1933 to \$21.7 million in 1941, an increase of 36.3%. After declining from \$4.3 million in 1933 to \$4.2 million in 1934, the trend of these expenditures in first class districts rose steadily, with the exception of 1939, to \$5.9 million in 1941, an increase of 37.4% over 1933.

Second class districts experienced a similar, though not as sharp an upward trend as first class districts, these costs rising from \$2.8 million in 1933 and 1934 to \$3.5 million in 1941, an increase of 24.7%.

These expenditures in third class districts rose steadily from \$4.8 million in 1933 to \$6.6 million in 1941, an increase of 35.7%.

The upward trend of these expenditures in fourth class districts was sharper than in other districts, annual disbursements rising from \$3.9 million in 1933 to \$5.6 million in 1941, an increase of 44.1%. Yet, during this period the number of school buildings in use in fourth class districts dropped from 9,015 in 1933 to 7,660 in 1941, a decrease of about 15%.<sup>1</sup> Coincidentally, pupil attendance also dropped from 638.6 thousand to 598.5 thousand, a decline of 16.3%.

<sup>1</sup>Despite the decrease in the number of buildings, it may well be that total capacity increased and maintenance costs were justifiably increased.



reached their maximum attendance with the peak in 1928. Also attendance at secondary schools that year doubled the figures of 1920, the earliest year in which statistics on secondary schools were reported.

There was a sharp reduction in capital outlays, beginning in 1930, when \$29 million were spent, until 1934 when these expenditures fell to \$4.3 million, a low for the entire period. Capital outlays, thereafter, increased to \$9.8 million in 1936. In 1937 and 1938 they rose sharply to more than \$26 million annually, establishing high points for the 1933-1942 period. After 1938 there was a sharp decline to \$7.6 million in 1941, almost the same amount spent in 1920.

As nearly as can be determined by careful analysis of the statistical reports, about \$187 million or 67% of the capital outlays between 1928 and 1942 were financed by the flotation of long term bonds and the balance, \$90 million or 33%, was absorbed from current revenues. The records do not lend themselves to more detailed analysis in this respect, nor in regard to the years prior to 1928.

#### CAPITAL OUTLAYS—BY DISTRICTS—1920-1942

Expenditures for capital outlays, by first class districts and by all other districts combined, for selected years during the period 1920-1942 are shown below:

School Years	First Class Districts	Other Districts	Total	First Class Districts	Other Districts	Total
1920 .....	\$ 532	\$ 7,417	\$ 7,949	100.0	100.0	100.0
1922 .....	1,901	15,000	16,901	357.2	202.2	212.6
1923 .....	6,376	17,924	24,300	1197.8	241.7	305.7
1925 .....	13,311	25,147	38,458	2500.9	339.0	483.8
1928 .....	10,322	24,467	34,789	1939.2	329.9	437.7
1932 .....	7,137	13,347	20,484	1341.0	179.9	257.7
1933 .....	4,630	6,559	11,189	869.8	88.4	140.8
1937 .....	7,924	18,564	26,488	1488.8	250.3	333.2
1938 .....	14,106	11,941	26,047	2650.3	161.0	327.7
1940 .....	5,899	8,848	14,747	1108.2	119.3	185.5
1942 .....	1,351	6,501	7,852	253.9	87.7	98.8

During the period, 1920-1942, first class districts expended \$139.9 million or 29.1% of the total; second class districts \$81.6 million or

## PART IV

### CAPITAL OUTLAYS AND SCHOOL PLANT

#### CAPITAL OUTLAYS—ALL DISTRICTS—1920-1942

Second in importance to operating expenditures are capital outlays. They are usually made for acquisition of land, buildings, new construction, alterations, and remodeling of school buildings.

For the period, 1920 to 1942, reported capital outlays for all districts were as follows:

#### Capital Outlays (thousands of dollars)—All Districts—1920-1942

School Years	Amount	Average	Ratio to 1920-1922
1920-1922 .....	\$37,621	\$12,540	100.0
1923-1932 .....	311,648	31,165	248.5
1933-1942 .....	131,769	13,177	105.1
1920-1942 .....	\$481,038	\$20,915	166.8

No regular trend was established for expenditures for capital outlays. The great period of expansion was, as shown in the foregoing table, from 1923 to 1932 when average daily school attendance was constantly mounting.

In 1920, the first year in which capital outlays were reported, these expenditures amounted to \$7.9 million. In 1922 they had more than doubled, reaching \$16.9 million. In 1924 they amounted to \$34.1 million, more than redoubling the 1920 figure.

The years from 1924 to 1929 were the "thirty million dollar years", with more than \$30 million spent for capital outlays by all districts combined in each of these years. These six years represented the greatest period of school building expansion in the history of the Commonwealth. An all-time high of \$38.5 million was reached in 1925. The year 1927 was a close second with \$37.5 million, while 1926 with \$32 million was the lowest in this period. During the other "thirty million dollar years"; namely, 1924, 1928, and 1929, between \$34 million and \$35 million were expended annually for capital outlays. It was during these years that elementary schools

17%; third class districts \$128.3 million or 26.7%; and fourth class districts \$131.1 million or 27.3% of the aggregate. In 1920 capital outlays in first class districts represented only 6.7% of the aggregate, while in the peak year of 1925 their capital expenditures were 34.6% of the total. Expenditures of first-class districts amounted to \$1.3 million in 1942, representing 17.2% of the aggregate and, although severely curtailed by comparison with the period, 1923-1940, were 153.9% greater than in 1920.

Except for the period, 1920-1922, *average* annual expenditures of the two first class districts exceeded those of any other class. These *average* figures follow:

**Capital Outlays (thousands of dollars)—Annual Average—By Classes of Districts—1920-1942**

School Years	First	Second	Third	Fourth	Ratio to 1920-22			
					First	Second	Third	Fourth
1920-1922	\$1,215	\$3,677	\$3,984	\$3,664	100.0	100.0	100.0	100.0
1923-1932	9,286	5,265	8,111	8,503	764.3	143.2	203.6	232.1
1933-1942	4,341	1,794	3,528	3,513	357.3	48.8	88.6	95.9

Annual capital outlays for 1933-1941 (the only years for which this breakdown is possible) by classes of districts are shown below:

**Capital Outlays (thousands of dollars)—By Classes of Districts—1933-1941**

School Years	First	Second	Third	Fourth	Total
1933	\$ 4,630	\$ 1,804	\$ 2,567	\$ 2,188	\$ 11,189
1934	856	1,036	1,064	1,338	4,294
1935	344	942	1,787	2,534	5,607
1936	1,512	1,837	3,058	3,426	9,833
1937	7,924	3,816	6,852	7,895	26,487
1938	14,106	2,929	5,024	3,989	26,048
1939	5,400	1,773	5,912	4,997	18,082
1940	5,899	1,694	4,069	3,085	14,747
1941	1,393	893	2,444	2,901	7,631
Totals	\$42,064	\$16,724	\$32,777	\$32,353	\$123,918
Ratio 1941 to 1933	30.1	49.5	95.2	132.6	68.2

Total capital outlays from 1933 to 1941 amounted to \$123.9 million. First class districts disbursed \$42 million or 33.9% of the total; second class districts \$16.7 million or 13.5%; third class districts \$32.8 million or 26.5%; and capital expenditures of fourth class

districts amounted to \$32.3 million or 26.1% of the total for the period.

The high point of first class district expenditures for capital outlays during the period 1933-1941 was \$14.1 million in 1938 or 54.2% of the over-all capital outlays, of \$26 million for that year. The largest annual expenditures of all other districts were in 1937, when they aggregated \$26.5 million. Of this total, second class districts spent \$3.8 million or 14.4%; third class districts \$6.9 million or 25.9%; and fourth class districts \$7.9 million or 29.8%.

In 1939, a representative year for capital outlays, there were 2,552 school districts with 1.7 million pupils in average daily attendance as shown below:

**School Districts and Pupils—1939**

Classes	Districts	Number of Pupils		
	Number	Elementary	Secondary	Totals
First .....	2	202,400	130,329	332,729
Second .....	20	122,112	101,742	223,854
Third .....	258	309,599	222,233	531,832
Fourth .....	2272	459,601	158,812	618,413
Totals .....	2552	1,093,712	613,116	1,706,828

The preceding figures indicate that in 1939 attendance in the two first class districts represented 19.5% of total attendance in all districts. Capital outlays by the first class districts for the period, 1933-1941, represented 33.9% of total capital outlays of all districts for that period.

**VALUE OF SCHOOL PROPERTY—ALL DISTRICTS—1920-1942**

With large expenditures for capital outlay values of school properties might be expected to increase. Such increases would not necessarily be proportionate to capital outlay, since various properties are sold from time to time, while others become obsolete, requiring replacement. However, the reported value of all school properties increased \$439 million or 191.3% in the period 1920-1942. This compares with reported expenditures of \$481 million for capital outlays. In 1922 school property was valued at \$243 million, an increase of

\$14 million over 1920. By 1932 reported values had risen \$336 million to \$579 million. The value of school property was further increased \$89 million to \$668 million in 1942.

The value of school properties is important, because it indicates the degree of expansion of school plant of the Commonwealth to meet expanding enrollment and higher standards of service.

#### VALUE OF SCHOOL PROPERTY—BY DISTRICTS—1920-1942

The increasing values in first class districts and in all other districts combined for the period, 1920-1942, are shown below:

**Reported Values of School Property 1920-1942 (thousands of dollars)**  
Ratio to 1920

School Years	First Class Districts	Total	All Other Districts	First Class Districts	All Other Districts	Total
1920 .....	60,987	168,348	229,335	100.0	100.0	100.0
1922 .....	62,440	180,970	243,410	102.4	107.5	106.1
1928 .....	148,506	358,911	507,417	243.5	213.2	221.3
1932 .....	170,446	408,594	579,040	279.5	242.7	252.5
1933 .....	171,898	400,757	572,655	281.9	238.0	249.7
1935 .....	166,894	408,999	575,893	273.7	242.9	251.1
1940 .....	196,992	461,065	658,057	323.0	273.9	286.9
1942 .....	195,128	473,000	668,128	320.0	281.0	291.3

In 1920 values in first class districts represented 26.6% of the over-all value. By 1942 29.2% was in first class districts. Values in first class districts in 1942 were more than triple those of 1920, rising from \$61 million in 1920 to \$195.1 million in 1942, an increase of 220%. The combined reported values of other districts rose from \$168.3 million in 1920 to \$473 million in 1942, an increase of 181%.

The changes in reported values for each class of districts during the period 1933-1941 are presented below:

**Reported Value of School Property (thousands of dollars)—By Classes of Districts—1933-1943**

School Years	First	Second	Third	Fourth	Total
1933 .....	171,898	112,035	164,946	123,776	572,655
1934 .....	177,227	112,386	170,437	125,025	585,075
1935 .....	166,894	113,135	171,655	124,208	575,892
1936 .....	168,325	114,698	173,623	126,853	583,499
1937 .....	170,472	114,943	175,379	138,547	599,341
1938 .....	187,068	118,948	183,626	140,145	629,787
1939 .....	192,061	120,059	188,653	143,897	644,670
1940 .....	196,992	121,354	193,578	146,133	658,057
1941 .....	195,490	122,921	195,350	147,806	661,567
Ratio 1941 to 1933	113.7	109.7	118.4	119.4	115.5

The net increase in the over-all reported values of school properties during the period, 1933-1942, was \$88.9 million or 15.5%. During this period properties in first class districts increased 13.7%; in second class districts 9.7%; in third class districts 18.4%, and in fourth class districts 19.4%.

All these reported property values are subject to serious qualifications. No effort is made to depreciate physical properties from year to year. In fact, in some districts there appear to be serious doubts as to whether the values of obsolete or abandoned or sold properties are eliminated from the reported values, though capital outlays for new properties and improvements are always added. Consequently, it is questionable whether these values from year to year do more than reflect, in certain districts at least, the reported values at the beginning of the period plus subsequent annual capital outlays. Furthermore, in some districts the sales value of sold properties, rather than the original value, is deducted, whether or not the sales value is more or less than the original value.

A comparison of the over-all values for 1933 and 1942 in the above table with the aggregate of the capital outlays between 1934 and 1941 indicates a net shrinkage of \$23.8 million as shown below:

Values and Capital Outlays (thousands of dollars)—By Classes of Districts— 1933-1941					
	First	Second	Third	Fourth	Total
Values—1933 ..	171,898	112,035	164,946	123,776	572,655
Capital outlays 1934-1941 ....	37,434	14,919	30,209	30,166	112,728
Totals .....	209,332	126,954	195,155	153,942	685,383
Values—1941 ..	195,490	122,921	195,350	147,806	661,567
Difference .....	—13,842	—4,033	—195	—6,136	—23,816

The apparent shrinkage in values may be due in part to elimination of values of school buildings which were either obsolete or sold. During the period, 1933-1941, the use of 88 school buildings in first class districts was discontinued; 53 in second class districts; 242 in third class districts; and 1,355 in fourth class districts; a total of 1,738 school buildings abandoned.

In 1920 it was reported that 15,303 school buildings were in use. Of these 10,422 or 68% were "one-room" schools. The total number of school buildings decreased to 10,006 in 1942, a reduction of 5,297 buildings or 34.6% less than in 1920. Of the school buildings in use in 1942, 4,402 or 44%, were "one-room" schools. Up to 1942 exactly 6,393 "one-room" schools have been closed since 1911, partly as a result of grants (\$200 annually for each school closed) made by the Commonwealth to encourage consolidation of such schools. These subsidies have been paid continuously since 1921. Under the present laws these annual amounts must be paid indefinitely, despite the fact that more than two-thirds of these schools were closed from ten to thirty years ago.

#### NUMBER OF SCHOOL BUILDINGS—ALL DISTRICTS—1920-1942

The number of school buildings in use by first class districts and the combined number for all other districts, for selected years, is shown in the following table:

School Years	Number of School Buildings			Ratio to 1920		
	First Class	Other Districts	Total	First Class	Other Districts	Total
1920 .....	370	14,933	15,303	100.0	100.0	100.0
1922 .....	349	13,377	13,726	94.3	89.6	89.7
1924 .....	506	13,369	13,875	136.8	89.5	90.7
1928 .....	484	13,352	13,836	130.8	89.4	90.4
1930 .....	746	12,465	13,211	201.6	83.5	86.3
1932 .....	500	11,819	12,319	135.1	79.1	80.5
1933 .....	492	11,561	12,053	133.0	77.4	78.8
1934 .....	483	11,438	11,921	130.5	76.6	77.9
1940 .....	423	10,306	10,729	114.3	69.0	70.1
1942 .....	367	9,639	10,006	99.2	64.5	65.4

The two first class districts had about the same number of school buildings in use in 1942 as in 1920. All other districts, however, had in use only 9,639 buildings in 1942, a decrease of 5,294 or 35.5% since 1920. During the period, 1933-1941, the total number of school buildings in use declined from 12,053 in 1933 to 10,315 in 1941, a decrease of 14.4%.

The reductions in buildings in each class of districts during the period, 1933-1941, is as follows:

<b>School Buildings in Use—By Classes of Districts—1933-1941</b>					
School Years	First	Second	Third	Fourth	Total
1933 .....	492	499	2,047	9,015	12,053
1934 .....	483	485	2,036	8,917	11,921
1935 .....	407	482	2,056	8,849	11,794
1936 .....	468	475	2,001	8,748	11,692
1937 .....	467	475	1,947	8,448	11,337
1938 .....	461	485	1,954	8,340	11,240
1939 .....	435	468	1,863	8,075	10,841
1940 .....	423	487	1,894	7,925	10,729
1941 .....	404	446	1,805	7,660	10,315
Ratio 1941 to 1933 .....	82.1	89.4	88.2	85.0	85.6

The number of buildings in use in first class districts was reduced from 492 in 1933 to 404 in 1941, a decrease of 17.9%. Buildings in use in second class districts were 499 in 1933 and 446 in 1941, a reduction of 10.6%. In third class districts the number declined from 2,047 in 1933 to 1,805 in 1941, a decrease of 11.8%. Those in fourth class districts were reduced from 9,015 in 1933 to 7,660 in 1941, a decrease of 15%.

It should be remarked that, despite the substantial reduction in numbers of school buildings, replacements of obsolete properties with modern buildings frequently result in substantial increases in capacity.



## PART V

### LONG AND SHORT TERM DEBT—1920-1942

#### DEBT—ALL DISTRICTS—1920-1942<sup>1</sup>

Net bonded debt is the gross long term bonded indebtedness less applicable sinking fund assets. Reliable data on long term debt prior to 1920 are not available.

The reported amount of outstanding bonds and the reported sinking fund balances for all districts for selected years are presented below:

**Reported Total Bonded Debt (thousands of dollars)—All Districts—Year Ending 1920-1942**

	1920	1930	1935	1940	1942
Outstanding Bonds . . . .	79,641	260,942	260,929	273,276	246,398
Sinking Fund Balances . .	8,642	15,908	18,404	19,602	44,781
Net Bonded Debt . . . . .	70,999	245,034	242,525	253,674	201,617
Ratio to 1920 . . . . .	100.0	345.1	341.6	357.3	284.0

The reported sinking fund balances are not the true balances. There is no uniformity in practices relating to them, some districts reporting only cash balances, while others report both cash and investments held in the sinking funds. Consequently, the sinking fund balances are in fact much larger than reported, particularly in the larger districts. For instance, the reported sinking fund balances for the first class districts in 1920 were \$4.142 million whereas detailed analyses of the sinking funds of the Philadelphia and Pittsburgh districts (see reports of the Joint State Government Commission published May 1944) show a total for the two sinking funds combined of \$6.46 million for year ending 1920. The Philadelphia balance was \$4.777 million and the Pittsburgh balance \$1.683 million. Consequently, the actual total sinking fund balances of the two districts combined in 1920 were nearly 36% higher than the reported balances. In the later years the discrepancies are not so large. For instance, in 1942 the difference between reported combined balances and actual combined sinking fund balances of Philadelphia and Pittsburgh was

<sup>1</sup> For further discussion of this subject see Report No. 1 "The Debt of the Commonwealth of Pennsylvania and its Local Subdivisions" published by the Joint State Government Commission December 16, 1943.

only \$23 thousand or less than one-tenth of one per cent. This indicates that, at least in the first class districts in more recent years, the tendency is to report sinking fund balances more exactly.

Furthermore, even with respect to gross bonded indebtedness, the reported figures are frequently at variance with the actual figures developed by detailed analyses. For instance, in 1920 in first class districts the reported gross bonded debt was \$24.257 million, whereas the detailed analyses showed \$26.745 million, a variation of 9.3%.

As a result of these variations, the reported figures on gross bonded debt, sinking fund balances, and net bonded debt are subject to considerable qualifications. However, it would appear that the variations have grown less in recent years and the reported figures at least show the major trends.

The reported combined net long term debt of all districts more than tripled between 1920 and 1930, increasing from \$71 million to \$245 million or 245.1%. It increased further to \$255.3 million in 1932 and then declined to \$242.5 million in 1935. It then rose to \$243.4 million in 1936, declined to \$240.8 million in 1937, and thereafter rose rapidly to a peak in 1939, when net long term debt amounted to \$257.9 million, an increase of 263.3% over 1920. A moderate decline of \$4.3 million in 1940 was followed by two sharp annual declines, aggregating \$52 million, which reduced net long term debt to \$201.6 million in 1942. The 1942 reported net debt was nearly triple the net bonded debt of 1920, but 17.7% less than that of 1930.

Since 1920 school districts have carried large amounts of short-term floating indebtedness,<sup>1</sup> not included in the long term indebtedness. In 1920 this floating indebtedness was \$7.7 million for all districts combined; it rose to \$17 million by 1922 and declined to \$11.4 million by 1929, an increase of 46.9% over 1920. From this point on, there were sharp fluctuations in these short term loans with a peak of \$18.9 million in 1937. Thereafter, floating indebtedness declined irregularly to \$9.3 million in 1942, an increase of 20.5% over 1920.

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<sup>1</sup> This item does not include either current accounts payable or current operating cash balances.

**REPORTED NET LONG TERM DEBT—BY CLASSES OF DISTRICTS—  
1920-1942**

Most of the funds for financing capital outlay between 1920-1942, which aggregated over \$461 million, of which \$211 million were expended during the "thirty million dollar years" (1924-1929), were procured from the proceeds of the sales of long term bonds. The period of capital expansion in the 1920's resulted in a large increase in the bonded debt.

The reported net long term bonded debt of the four classes of districts and the proportion of each class, for selected years between 1920 and 1942, is shown below:

**Reported Net Long Term Debt (thousands of dollars)—By Classes of Districts—  
1920-1942**

School Years	First	Second	Third	Fourth	Total	Percentage of Total				
						First	Second	Third	Fourth	Total
1920	\$20,115	\$14,151	\$22,483	\$14,250	\$70,999	28.3	19.9	31.7	20.1	100.0
1930	89,009	50,314	61,037	44,673	245,033	36.3	20.5	24.9	18.3	100.0
1935	83,118	54,114	68,277	37,017	242,526	34.3	22.3	28.1	15.3	100.0
1940	97,901	51,674	65,897	38,201	253,673	38.6	20.3	26.0	15.1	100.0
1942	62,002	46,435	60,531	32,649	201,617	30.8	23.0	30.0	16.2	100.0
% Increase—1942 Over 1920						208.2	228.1	169.2	129.1	184.0

After 1920 the two first class districts ranked first in percentage of reported over-all long term net bonded debt. Third class districts ranked second and second class districts ranked third, while fourth class districts were fourth.

The reported net long term bonded debt of each of the four classes of districts, consisting of bonds and sinking fund balances, for selected years between 1920 and 1942, are shown in four tables. Debt figures for the first class districts are presented below:

**First Class Districts (thousands of dollars)—Reported Debt—1920-1942**

	1920	1930	1935	1940	1942
Outstanding Bonds . . . .	24,257	89,844	85,521	101,167	89,569
Sinking Fund Balances . .	4,142	836	2,402	3,266	27,568
Net Bonded Debt . . . . .	20,115	89,008	83,119	97,901	62,001
Ratio to 1920 . . . . .	100.0	442.5	413.2	486.7	308.2

The reported net long term bonded debt of first class districts in 1930 and 1935 more than quadrupled that of 1920. By 1940 it had nearly quintupled and by 1942 was more than triple the debt of 1920.

The two first class districts did not report any short term floating indebtedness during the period, 1923-1932, nor thereafter did Pittsburgh report any short term loans. Philadelphia carried all of the floating indebtedness of the first class districts<sup>1</sup> after 1932.

The reported gross and net long term bonded debt of the second class districts is shown below:

	<b>Second Class Districts (thousands of dollars)—Reported Debt—1920-1942</b>				
	1920	1930	1935	1940	1942
Outstanding Bonds . . . .	15,684	55,228	59,817	57,077	52,176
Sinking Fund Balances . .	1,533	4,914	5,703	5,403	5,740
Net Bonded Debt . . . . .	14,151	50,314	54,114	51,674	46,436
Ratio to 1920 . . . . .	100.0	355.6	382.4	365.2	328.1

In second class districts the reported net debt in 1930 more than tripled that of 1920. In 1935 the debt rose to \$54.1 million, nearly four times that of 1920. By 1940 the debt was reduced to \$51.7 million, an increase of 265.2% over 1920, and by 1942 it was further reduced to \$46.4 million, an increase of 228.1% over 1920.

In addition to long term bonded debt, second class districts carried sums of floating indebtedness which amounted to \$885 thousand in 1920. By 1935 short term debt had more than tripled that of 1920, rising to \$2.7 million. It continued to rise in 1936 and 1937 and, thereafter, declined to \$1.4 million in 1942, an increase of 57.3% over 1920.

The reported gross and net long term bonded debt of third class districts is presented below:

	<b>Third Class Districts (thousands of dollars)—Reported Debt—1920-1942</b>				
	1920	1930	1935	1940	1942
Outstanding Bonds . . . .	24,378	66,997	74,765	73,007	68,385
Sinking Fund Balances . .	1,895	5,960	6,488	7,110	7,854
Net Bonded Debt . . . . .	22,483	61,037	68,277	65,897	60,531
Ratio to 1920 . . . . .	100.0	271.5	303.7	293.1	269.2

In third class districts the reported net long term debt, which amounted to \$22.5 million in 1920, rose rapidly to \$61 million in 1930, an increase of 171.5%. By 1935 it had risen to \$68.3 million,

<sup>1</sup> For more detailed analyses of the Philadelphia and Pittsburgh School Districts, see two reports of these districts released by the Joint State Government Commission, dated May, 1944.

an increase of 203.7% over 1920. By 1942 the debt had fallen to \$60.5 million, an increase of 169.2% over 1920.

Third class districts also carried large amounts of floating indebtedness during the period 1920-1942. These temporary loans amounted to \$2.5 million in 1920 and by 1930 rose to \$4.7 million. By 1942 they declined to \$3.1 million, an increase of 21.3% over 1920.

Gross and net reported long term bonded debt of the fourth class districts is shown below:

	Fourth Class Districts (thousands of dollars)—Reported Debt—1920-1942				
	1920	1930	1935	1940	1942
Outstanding Bonds . . . .	15,321	48,872	40,827	42,024	36,268
Sinking Fund Balances . .	1,072	4,199	3,810	3,824	3,619
Net Bonded Debt . . . . .	14,249	44,673	37,017	38,200	32,649
Ratio to 1920 . . . . .	100.0	313.5	259.8	268.1	229.1

Although the reported net long term debt of fourth class districts in 1942 more than doubled that of 1920, the percentage of increase during the 23 year period was the lowest of any of the various classes of districts. In 1920 the reported debt of this class amounted to \$14.2 million. By 1930 it had risen to \$44.7 million, an increase of 213.5%. By 1935 it declined to \$37 million, an increase of 159.8% over 1920. In 1940 it again rose to \$38.2 million, an increase of 168.1% over 1920. A reduction to \$32.6 million was effected by 1942, still an increase of 129.1% over 1920, but 27% below 1930.

Fourth class districts carried a larger amount of floating indebtedness than other classes of districts. In 1920 the outstanding temporary loans amounted to \$4.2 million and by 1930 had increased to \$6.7 million. Thereafter, short term loans declined to \$3.5 million in 1942, a decrease of 18% from 1920.

#### REPORTED BONDS ISSUED—ALL DISTRICTS—1928-1942

In general, long term bonds were issued to finance capital outlays. Unfortunately, the statistical reports do not record the amounts of bonds issued prior to 1928. Neither do they report even now the purposes for which bonds are issued. Nevertheless, references to reports of individual school districts indicate a close relation between the amount of the bonds issued and capital outlays.<sup>1</sup>

<sup>1</sup> See "Analysis of Operations and Debt of Eleven Selected School Districts, 1920-1943"—Joint State Government Commission, May 13, 1944.

As nearly as can be determined by careful analysis of the statistical reports, about \$187 million or 67% of the capital outlays in 1928 to 1942 were financed by the flotation of long term bonds and the balance, about \$90 million or 33%, was absorbed from current revenue.

During the period, 1920-1942, federal grants of \$25.6 million<sup>1</sup> were made to the school districts for construction and reconstruction purposes and were 9% of the total expenditures for capital outlays. Adequate records have not been maintained to permit determination of the amount of bonds issued by school districts to comply with the federal requirement for participation on a 45-55% basis in these federal P.W.A. grants. However, it is estimated that about \$28 million of all bonds issued between 1935 and 1938 were for these matching purposes.<sup>1</sup>

Comparisons of annual expenditures reported for capital outlays and proceeds from bonds sold between 1928 and 1942 are presented below:

**Comparisons of Expenditures for Capital Outlays and Bond Sales**

School Year Ending	Capital Outlays (thousands) <sup>2</sup>	Proceeds from Bonds (thousands)	Excess of Capital Outlays <sup>3</sup> Over Bond Receipts (thousands)
1928 .....	\$34,789	\$11,170	\$23,619
1929 .....	34,580	18,107	16,473
1930 .....	29,168	15,698	13,470
1931 .....	26,205	13,289	12,916
1932 .....	20,484	6,923	13,561
1933 .....	11,189	1,633	9,556
1934 .....	4,294	9,618	—5,324
1935 .....	5,607	7,059	—1,452
1936 .....	9,833	15,926	—6,093
1937 .....	26,488	12,181	14,307
1938 .....	26,047	23,047	3,000
1939 .....	18,081	25,449	—7,368
1940 .....	14,746	14,637	109
1941 .....	7,631	7,128	503
1942 .....	7,853	4,951	2,902
<b>Total .....</b>	<b>\$276,995</b>	<b>\$186,816</b>	<b>\$90,179</b>

<sup>2</sup> These figures after 1933 include federal P.W.A. grants.

<sup>3</sup> The excess over a period of years may represent the amount of capital outlays paid from current revenues, although this may not be true in any one year.

<sup>1</sup> This sum represents 45% of \$54 million estimated by the Department of Public Instruction to have been spent on P.W.A. construction projects in the period 1935-1938. The P.W.A. formula provided for outright grants by the federal government of 45% of the cost of approved projects and further provided that this federal agency would purchase any bonds issued by the grantee, but not exceeding 55% of the total approved costs of such projects. No state records are available to substantiate the estimate of \$54 million spent on these P.W.A. projects.

It is to be noted that the reported expenditures for capital outlays during the period amounted to nearly \$277 million, while the reported bond receipts amounted to \$187 million or about 67.5%. In other words, disregarding minor receipts from other sources, 32.5% of reported capital outlays were apparently paid from current receipts, including \$25.6 million of P.W.A. grants. The other minor receipts, consisting of premiums and interest on bonds, unexpended balances from the proceeds of bonds previously issued, etc., are disregarded because of the absence of detailed records.

### REPORTED BONDS ISSUED—BY DISTRICTS—1928-1942

Comparisons of annual expenditures for capital outlays and reported proceeds from bonds sold between 1928 and 1942 for each class of district are presented in the following tables:

**Bonds Issued by First Class and Second Class Districts**  
 First Class Districts (thousands)      Second Class Districts (thousands)

School Years	Capital Outlays	Proceeds From Bonds Issued	Excess <sup>1</sup> or Deficit	Capital Outlays	Proceeds From Bonds Issued	Excess <sup>1</sup> or Deficit
1928 .....	\$10,322	\$6,423 <sup>2</sup>	+\$3,899	\$6,258	\$1,806	+\$4,453
1929 .....	9,432	3,500 <sup>2</sup>	+ 5,932	6,762	3,850	+ 2,912
1930 .....	8,590	5,000	+ 3,590	3,988	2,550	+ 1,438
1931 .....	7,530	2,000 <sup>2</sup>	+ 5,530	3,021	1,675	+ 1,346
1932 .....	7,137	3,000 <sup>2</sup>	+ 4,137	2,450	395	+ 2,055
1933 .....	4,630	.....	+ 4,630	1,804	53	+ 1,751
1934 .....	856	.....	+ 856	1,036	3,753	— 2,717
1935 .....	344	350	— 6	942	2,045	— 1,103
1936 .....	1,512	3,100	— 1,588	1,837	2,529	— 692
1937 .....	7,924	1,000	+ 6,924	3,816	3,686	+ 130
1938 .....	14,106	13,150	+ 956	2,929	3,470	— 541
1939 .....	5,400	15,850	—10,450	1,773	2,625	— 852
1940 .....	5,899	8,750	— 2,851	1,694	1,669	+ 25
1941 .....	1,393	1,500	— 107	893	1,883	— 990
1942 .....	1,351	1,500	— 149	1,221	1,454	— 233
Totals ..	86,426	65,123	+21,303	40,424	33,442	+ 6,982

% of Capital Outlay .. 100.0      75.4      + 24.6      100.0      82.7 %      17.3

<sup>1</sup> Excess or deficit of capital outlays compared with bond receipts.

<sup>2</sup> A comparison of these reported figures for those four years with actual bonds issued in the school years by the two first class districts show discrepancies of \$6.577 million in 1928; \$3 million in 1929, \$2 million in 1931 and \$2 million in 1932. The amounts reported in each year were lower than actual proceeds of bond sales by the amounts of the discrepancies. Similar comparisons of the other years in the table showed no discrepancies. The discrepancies for the four years mentioned were probably due to attempts to adjust the different calendar years used in first class districts as school years to conform with school years used by other districts.

During the period, 1928-1942, total reported proceeds from bonds in first class districts amounted to \$65.1 million or 34.9% of over-all reported bond proceeds. Since reported proceeds from bonds were \$21.3 million or 24.6% less than expenditures for capital outlay, it may be assumed that this difference was financed from current receipts, including P.W.A. grants.

Total reported proceeds from bonds issued by second class districts during the same period amounted to \$33.4 million or 17.8% of the reported over-all proceeds from bonds issued. Capital outlays during this period exceeded reported proceeds from bonds by \$7 million or 17.3%. This difference appears to have been financed by current receipts, including P.W.A. grants.

**Bonds Issued by Third Class and Fourth Class Districts**

School Years	Third Class Districts (thousands)			Fourth Class Districts (thousands)		
	Capital Outlays	Proceeds From Bonds	Excess <sup>1</sup> or Deficit	Capital Outlays	Proceeds From Bonds	Excess <sup>1</sup> or Deficit
1928	\$8,759	\$1,415	+\$7,344	\$9,450	\$1,526	+\$7,924
1929	8,170	4,883	+ 3,287	10,216	5,875	+ 4,341
1930	7,077	3,475	+ 3,602	9,513	4,673	+ 4,840
1931	6,068	4,552	+ 1,516	9,587	5,062	+ 4,525
1932	5,097	1,987	+ 3,110	5,800	1,541	+ 4,259
1933	2,567	853	+ 1,714	2,188	728	+ 1,460
1934	1,064	4,704	- 3,640	1,338	1,162	+ 176
1935	1,787	2,934	- 1,147	2,534	1,730	+ 804
1936	3,058	5,349	- 2,291	3,426	4,948	- 1,522
1937	6,852	5,232	+ 1,620	7,895	2,263	+ 5,632
1938	5,024	4,282	+ 742	3,989	2,146	+ 1,843
1939	5,912	4,237	+ 1,675	4,997	2,737	+ 2,260
1940	4,069	2,923	+ 1,146	3,085	1,295	+ 1,790
1941	2,444	2,028	+ 416	2,901	1,717	+ 1,184
1942	2,508	972	+ 1,536	2,772	1,025	+ 1,747
Totals	70,456	49,826	+20,630	79,691	38,428	+41,263

% of Capital Outlays ..	100.0	70.7	+29.3	100.0	48.2	+51.8
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<sup>1</sup> Excess or deficit of capital outlays compared with bond receipts.

In third class districts reported total proceeds from bonds amounted to \$49.8 million during the period 1928-1942 or 26.7% of the aggregate reported bond proceeds of all districts. Capital outlays during the same period exceeded reported bond proceeds by \$20.6 million or



29.3%, indicating that this difference was paid from current receipts and P.W.A. grants.

Fourth class districts appear to have financed \$41.2 million or 51.8% of the capital outlays during 1928-1942 from current funds and P.W.A. grants. Only \$38.4 million were received from reported proceeds of bonds, while the capital outlays amounted to \$79.7 million for the period.

#### **BONDS REPORTED REDEEMED—ALL DISTRICTS—1928-1942**

Total bonds reported redeemed amounted to \$189 million or about \$2 million more than reported total proceeds from the bonds issued during the same period, with debt service charges reported as averaging 18.7% of total expenditures. The balance of bonds of all districts, reported outstanding at the end of the school year 1942, amounted to \$246 million.

#### **BONDS REDEEMED—BY DISTRICTS—1928-1942**

The total of bonds of first class districts, reported redeemed between 1928 and 1942, amounted to \$6.9 million less than reported total proceeds from the bonds issued during the same period, with reported debt service charges averaging 20.2% of total expenditures of the districts for all purposes between 1928 and 1942. Bonds reported redeemed in second class districts exceeded reported proceeds from bonds issued by \$7 million, with reported debt service charges averaging 21.3% of total expenditures. In third class districts the amount of bonds reported redeemed exceeded the reported proceeds from bonds issued by \$7.5 million, with reported debt service charges averaging 20.6% of total expenditures. The total of bonds of fourth class districts reported redeemed in this period amounted to \$5 million less than total reported proceeds from the bonds issued, with reported debt service charges averaging 14.3% of total expenditures for all purposes for the period.

#### **DEBT SERVICE CHARGES**

The data published by the Department of Public Instruction relating to debt service charges, based upon the reports made by the various

school districts, do not permit a breakdown between payments made for principal, interest, and taxes on long term bonds on one hand, and similar payments on short term loans and refunds of taxes and tuition on the other hand. Consequently, these reported data cannot be related to long term bonded indebtedness of the districts. These data, however, are useful only in the analysis and discussion of over-all disbursements. Such a breakdown was published in 1923 and occasionally thereafter, but lack of continuity of this breakdown in published reports prevents either comprehensive analysis or the use of these data for the purposes to which they are normally applicable.

Furthermore, numerous districts do not pay their debt service charges on the bonded indebtedness through the general fund, but deposit special or pledged taxes directly into the sinking fund and, therefore, are not reflected in the reports of debt service charges of the general fund. Consequently, data published by the Department under "Total Debt Service" do not include debt service charges paid directly into the sinking funds from such special or pledged taxes.

## PART VI

### PER PUPIL STATISTICS—1913-1942

The efficiency of fiscal administration of a school system is frequently evaluated by relating the various elements of operating costs to the number of pupils served by the system. These per pupil statistics serve useful purposes, if used intelligently and realistically. However, when comparative statistics are used, a note of caution is necessary. Comparison of statistics of one district or one state with those of another is likely to result in erroneous conclusions, unless full weight is given to variations in collateral circumstances among the various areas.

#### CURRENT REVENUES PER PUPIL—1913-1942

Assessed valuations,<sup>1</sup> collections from real estate and head taxes, and grants (state and federal) per pupil for selected years are presented below:

##### Ratios of Current Revenues to Pupils

School Years	Amounts			Ratios to 1913		
	Valuations (thousands)	Tax Receipts <sup>2</sup>	Grants	Valuations	Tax Receipts	Grants
1913 .....	\$3.55	\$30.26	\$6.52	100.0	100.0	100.0
1916 .....	3.34	31.87	5.86	94.1	105.3	89.9
1920 .....	5.18	46.40	8.71	145.9	153.3	133.6
1922 .....	4.84	58.00	8.90	136.3	191.7	136.5
1928 .....	5.98	83.18	15.48	168.5	274.9	237.4
1932 .....	5.74	79.99	18.81	161.7	264.3	288.5
1933 .....	5.58	71.13	16.33	157.2	235.1	250.5
1940 .....	5.08	81.86	22.04	143.1	270.5	338.0
1941 .....	5.24	87.15	19.00	147.6	288.0	291.4
1942 .....	5.49	94.51	30.25	154.6	312.3	464.0
Ratio 1942 to 1920	106.0	203.7	347.3			

<sup>2</sup> Includes delinquent tax receipts and penalties.

<sup>1</sup> The per pupil assessed valuation of taxable property for the period, 1913-1933, was derived by dividing the total state valuation by the total number of pupils in average daily attendance. Thereafter, the per pupil valuations were those reported by the Department of Public Instruction.

Changes in total over-all assessed valuations of real properties for school district purposes are largely the result of changing economic conditions. When both valuations and the number of pupils fluctuate, valuation per pupil varies considerably. Fluctuation in tax receipts and grants are not exclusively dependent on changes in valuations, since the millage or tax rate levied on taxable property is an important factor in determining tax receipts, while the number of teachers is an important factor in determination of grants.

#### **ASSESSED VALUATIONS PER PUPIL**

The over-all valuation per pupil rose gradually from \$3.55 thousand in 1913 to \$5.18 thousand in 1920, an increase of 46%. It continued to rise to a peak of \$6.06 thousand in 1929, increasing 71% over 1913 and 17% over 1920. Thereafter, the trend was downward to a low of \$5 thousand in 1937. The trend was then reversed to reach \$5.49 thousand in 1942, an increase of 54.6% over 1913 and 6% over 1920.

#### **TAX RECEIPTS PER PUPIL**

Tax receipts per pupil more than tripled in the thirty year period, rising from \$30.26 in 1913 to a high of \$94.51 in 1942, an increase of 212.3%. After a steady rise from 1913 to 1920, when per pupil tax receipts were \$46.40, they rose steadily to \$86.45 in 1931, an increase of 185.7% over 1913 and 86.3% over 1920. After 1931, with a complete reversal in trend, tax receipts per pupil declined to \$66.90 in 1934. Thereafter, they increased rapidly to \$94.51 in 1942, an increase over 1920 of 103.7%.

#### **GRANTS PER PUPIL**

After declining from \$6.52 in 1913 to \$5.85 in 1919, grants per pupil rose to \$8.71 in 1920, an increase of 33.6% over 1913. After 1920 the trend was predominately upward to an all-time high of \$30.25 per pupil in 1942, an increase of 364% over 1913 and of 247.3% over 1920.

Assessed valuations and tax receipts per pupil in the period 1920 to 1942 were highest in first class districts with other districts ranking in consecutive order. Quite the reverse order among school districts is evident with respect to grants. In every year of the 23 year period,

grants per pupil were largest in fourth class districts. With the exception of a few years during the entire period, per pupil grants were in reverse order to the size of the districts.

**PER PUPIL ASSESSED VALUATIONS, TAX RECEIPTS, AND GRANTS  
—BY CLASSES OF DISTRICTS—1920-1942**

Assessed valuations, tax receipts, and grants per pupil for each class of district for the years 1920 and 1942 are given as follows:

**Valuations, Tax Receipts and Grants by Classes of Districts**

School Year	Classes of Districts				
	First	Second	Third Per Pupil	Fourth	Average
<b>School Year 1920</b>					
Assessed valuations (in thousands)	\$9.69	\$5.98	\$3.80	\$3.45	\$5.18
Receipts from taxes (in dollars)	60.53	59.82	47.78	34.81	46.40
Receipts from grants (in dollars)	5.00	8.74	7.65	11.23	8.71
<b>School Year 1942</b>					
Assessed valuations (in thousands)	11.93	7.15	3.84	2.90	5.49
Receipts from taxes (in dollars)	143.22	130.96	84.82	60.39	94.51
Receipts from grants (in dollars)	13.14	21.41	29.73	43.08	30.25

Valuations, tax receipts, and grants per pupil in the various classes of districts are presented hereafter in four tabulations for selected years. These data for first class districts are shown below:

**First Class Districts**

School Years	Valuations (thousands)	Tax Receipts	Grants	Ratios to 1920		
				Valuations	Tax Receipts	Grants
1920 .....	\$9.69	\$60.53	\$5.00	100.0	100.0	100.0
1922 .....	9.83	79.12	6.34	101.4	130.7	126.8
1928 .....	14.47	132.17	11.70	149.3	218.3	234.0
1932 .....	13.67	128.49	12.47	141.0	212.3	249.4
1933 .....	13.34	121.90	11.53	137.7	201.4	230.6
1940 .....	11.18	114.86	12.25	115.4	189.8	245.0
1941 .....	11.51	132.71	12.64	118.8	219.2	252.8
1942 .....	11.93	143.22	13.14	123.1	236.6	262.8

Valuations per pupil in first class districts rose from \$9.69 thousand in 1920 to a peak of \$14.63 thousand in 1929, an increase of 51%. Thereafter, the trend was reversed and dropped to a low of \$11.07 thousand in 1939. Then the trend was moderately upwards and per

pupil valuation reached \$11.93 thousand in 1942, an increase of 23.1% over 1920.

Tax receipts per pupil in first class districts rose steadily from \$60.53 in 1920 to \$134.85 in 1929, an increase of 122.8%. After an irregular downward trend from 1929 to 1939, when tax receipts per pupil dropped to \$102.23, they rose sharply to a peak of \$143.22 in 1942, an increase of 136.6% over 1920.

The trend of grants per pupil in first class districts was upward, rising from \$5.00 per pupil in 1920 to \$13.14 in 1942, an increase of 162.8%. The many fluctuations in annual amounts may be attributed in a large measure to special conditions in specific years. For example, payment of grants to school districts may be withheld until applications for appropriations and satisfactory financial reports are received by the Department of Public Instruction.

In second class districts the percentages of increases for valuations, tax receipts, and grants per pupil were not quite as high as in first class districts.

Valuations, receipts from taxes, and state grants of second class districts per pupil for selected years are presented in the following table:

		Second Class Districts			Ratios to 1920		
School	Years	Valuations (thousands)	Tax Receipts	Grants	Valuations	Tax Receipts	Grants
1920	.....	\$5.98	\$59.82	\$8.74	100.0	100.0	100.0
1922	.....	5.79	77.12	8.53	96.8	128.9	97.6
1928	.....	6.92	107.11	13.67	115.7	179.1	156.4
1932	.....	6.91	105.05	14.03	115.6	175.6	160.5
1933	.....	6.78	91.34	13.85	113.4	152.7	158.5
1940	.....	6.49	110.17	15.38	108.5	184.2	176.0
1941	.....	6.78	120.66	11.67	113.4	201.7	133.5
1942	.....	7.15	130.96	21.41	119.6	218.9	245.0

In 1920 valuations per pupil in second class districts were \$5.98 thousand and rose to \$7.15 thousand in 1942, an increase of 19.6%. The trend during the 23 year period was definitely upwards with declines in 1921 and 1924, when valuations per pupil were lower than in 1920. From 1924 to 1929 steady annual increases brought them to \$7.01 thousand, an increase of 17.2% over 1920. Thereafter, a fairly

steady decline reduced valuations per pupil to \$6.3 thousand in 1938, followed by a sharp upward trend which took them to a peak of \$7.15 thousand in 1942.

In second class districts tax receipts per pupil in 1942 more than doubled those of 1920, rising from \$59.82 in 1920 to \$130.96 in 1942, an increase of 118.9%. After a steady upward trend to \$107.82 in 1929, an increase of 80.2% over 1920, an irregular downward trend to \$85.12 in 1934 was sharply reversed to reach a peak of \$130.96 in 1942.

Grants per pupil in second class districts rose somewhat irregularly from \$8.74 in 1920 to \$21.41 in 1942, an increase of 145%.

Valuations, tax receipts, and grants per pupil in third class districts for selected years, are presented below:

School Years	Third Class Districts			Ratios to 1920		
	Valuations (thousands)	Tax Receipts	Grants	Valuations	Tax Receipts	Grants
1920 .....	\$3.80	\$47.78	\$7.65	100.0	100.0	100.0
1922 .....	3.38	57.36	7.24	88.9	121.0	94.6
1928 .....	3.73	77.98	12.90	98.2	163.2	168.6
1932 .....	3.46	72.58	17.24	91.1	151.9	225.4
1933 .....	3.38	62.75	12.83	88.9	131.3	167.7
1940 .....	3.51	80.27	19.98	92.4	168.0	261.0
1941 .....	3.65	82.49	15.53	96.1	172.6	203.0
1942 .....	3.84	84.82	29.73	101.1	177.5	388.6

In third class districts very little change occurred during the 23 year period in valuations per pupil, which increased from \$3.8 thousand in 1920 to \$3.84 thousand in 1942, an increase of only 1.1%. Tax receipts per pupil rose from \$47.78 in 1920 to \$84.82, an increase of 77.5%, and grants nearly quadrupled in the same period, rising from \$7.65 in 1920 to \$29.73 in 1942, an increase of 288.6%.

Coincidentally with increases in pupil attendance in third class districts, valuations per pupil declined from \$3.8 thousand in 1920 to \$3.38 thousand in 1933, the year of peak attendance. Later, as pupil attendance declined, valuations per pupil rose and reached \$3.84 thousand in 1942.

Tax receipts in third class districts rose steadily from \$47.78 per pupil in 1920 to \$83.35 in 1931, an increase of 74.4%. They declined

sharply for the next three years and fell to \$58.16 in 1934. Thereafter, the trend was reversed and tax receipts per pupil rose sharply to reach a peak of \$84.82 in 1942, an increase of 77.5% over 1920.

The trend in grants per pupil for third class districts was definitely upward, although irregularly so. They varied from \$7.65 in 1920 to \$6.36 in 1921 and then to \$7.24 in 1922. During the decade, 1923-1932, they ranged from \$9.76 to \$17.24 per pupil. Fluctuations ranged between \$12.83 and \$29.73 in the most recent period, 1933-1942.

In fourth class districts over the 23 year period valuations per pupil declined, while tax receipts per pupil increased 73.5%, and grants nearly quadrupled, increasing 283.6%.

Valuations, tax receipts, and grants per pupil in fourth class districts for selected years are shown below:

Fourth Class Districts				Ratios to 1920		
School Years	Valuations (thousands)	Tax Receipts	Grants	Valuations	Tax Receipts	Grants
1920 .....	\$3.45	\$34.81	\$11.23	100.0	100.0	100.0
1922 .....	2.94	41.45	12.99	85.2	119.1	115.7
1928 .....	3.18	55.73	19.73	92.2	160.1	175.7
1932 .....	2.91	50.32	25.48	84.3	144.6	226.9
1933 .....	2.81	43.17	22.70	81.4	124.0	202.1
1940 .....	2.65	53.89	31.38	76.8	154.8	279.4
1941 .....	2.79	54.58	27.73	80.9	156.8	246.9
1942 .....	2.90	60.39	43.08	84.1	173.5	383.6

Over the entire 23 year period, 1920-1942, valuations per pupil of \$3.45 thousand, established in 1920 for fourth class districts, were exceeded only twice—in 1923 and 1924 with \$3.53 thousand and \$3.73 thousand, respectively. After these peak years the trend was downward and valuations per pupil dropped to a low of \$2.46 thousand in 1937. This decline was more or less consistent with the general economic decline, despite increases in school attendance. After 1937 the trend of valuations per pupil was reversed and they reached \$2.90 thousand in 1942. This increase was due largely to a steady decline in enrollment during the later period.

Tax receipts per pupil rose steadily from \$34.81 in 1920 to \$60.14 in 1930, an increase of 72.8%. Thereafter, they dropped to a low of



\$41.42 in 1934. This short period of decline was followed by a complete reversal in the trend to an all-time high of \$60.39 in 1942, about the same amount as in 1930.

An irregular upward trend of grants per pupil in fourth class districts is apparent. Sharp fluctuations occurred during the entire 23 year period. Average grants per pupil varied from \$11.23 in 1920 to \$7.12 in 1921 and then to \$12.99 in 1922. During the next ten year period, 1923-1932, they ranged from \$15.33 to \$25.48 per pupil. In the next succeeding decade, 1933-1942, grants fluctuated from \$21.68 per pupil in 1935 to \$43.08 in 1942. The increase in the latest decade, 1933-1942, was due largely to a net reduction of about 20,000 pupils in attendance in fourth class districts in 1932-1941, accompanied by an increase of about 2,700 in number of teachers, which is an important factor in the formula used to determine grants. The reduction in pupil attendance embraced shifts of pupils from elementary schools to secondary schools. During the school years, 1932-1941 (for which reimbursements were made in 1933-1942) elementary school attendance was reduced by 75,507 pupils, or 14.8%, while attendance in secondary schools increased 55,599 pupils, or 33.1%. It might be expected that reduction in number of elementary school pupils would be accompanied by a somewhat proportionate decrease of about 2,500 elementary school teachers. Conversely, it might be expected that a proportionate increase in the number of secondary pupils would require about 2,200 additional secondary school teachers. However, instead of reducing the combined number of teachers in elementary and secondary schools by about 300 teachers (reduction of 2,500 elementary school teachers and increase of 2,200 secondary school teachers); the teaching staff was enlarged by 2,700 teachers in 1941, or 12.6% over the total in 1932.

#### PER PUPIL CURRENT OPERATING EXPENDITURES—ALL DISTRICTS—1920-1942

The principal schools expenditures for current operations consist of payments incidental to instruction and to plant operations and maintenance. These operating expenditures per pupil for all districts combined is shown in the following table:

**Current Operating Expenditures Per Pupil—Selected Years—1920-1942**

School Years	Instruction	School and Plant Maintenance	Operation	Other Expenses <sup>1</sup>	Total
1920 .....	\$37.86	\$8.47		\$5.77	\$52.10
1922 .....	46.88	8.59		7.27	62.74
1928 .....	64.45	11.70		10.60	86.75
1932 .....	67.60	10.69		11.07	89.36
1933 .....	61.78	8.97		10.02	80.77
1940 .....	71.89	12.50		12.04	96.43
1941 .....	73.84	13.49		12.56	99.89
1942 .....	80.48	14.57		14.18	109.23
Ratio 1942 to 1920	212.6	172.0		245.8	209.7

<sup>1</sup> Other expenses of operation include those for general administrative control, auxiliary agencies, and fixed charges, which, in the aggregate, represented 12.4% of total operating expenditures.

Current operating expenditures per pupil of \$109.23 in 1942 more than doubled those of \$52.10 in 1920, an increase of 109.7%. The major factor in this increase was the per pupil cost of instruction, which in 1942 amounted to \$80.48 and more than doubled the 1920 cost of \$37.86, an increase of 112.6%. Operation and maintenance of school plant costs per pupil rose from \$8.47 in 1920 to \$14.57 in 1942, an increase of 72%.

**OPERATING EXPENDITURES—PER PUPIL—BY CLASSES OF DISTRICTS—1933-1941**

The over-all operating expenditures of all districts increased 12.4% between 1933 and 1941, while pupils in attendance declined 9.1%. As a result, operating costs per pupil rose from \$80.77 in 1933 to \$99.89 in 1941, an increase of 23.7%. The operating expenditures per pupil in attendance for the period 1933-1941 by classes of districts is as follows:

**Operating Expenditures Per Pupil—By Classes of Districts—1933-1941**

School Years	First	Second	Third	Fourth	Average
1933 .....	\$113.89	\$92.95	\$72.08	\$65.69	\$80.77
1934 .....	112.40	85.84	68.12	64.86	78.01
.....	107.52	87.42	70.50	66.02	78.46
1936 .....	109.34	96.45	74.96	69.62	82.63
1937 .....	122.15	99.22	80.61	72.85	88.42
1938 .....	125.66	105.31	83.12	76.86	92.13
1939 .....	123.48	102.48	82.20	78.05	91.40
1940 .....	125.56	106.35	89.36	83.32	96.43
1941 .....	129.81	113.41	92.80	85.54	99.89
Ratio 1941 to 1933 ..	114.0	122.0	128.7	130.2	123.7

During the period the number of pupils in first class districts dropped from 349.6 thousand in 1933 to 310 thousand in 1941, a decrease of 11.3%. As operating expenditures in first class districts increased \$400 thousand or 1.1% during the same period, costs per pupil rose from \$113.89 in 1933 to \$129.81 in 1941, an increase of 14.0%.

The percentage of decline in number of pupils in second class districts was the same as in first class districts, dropping from 235 thousand in 1933 to 208.5 thousand in 1941, a decline of 11.3%. During the same period operating expenses in second class districts increased \$1.8 million or 8.2%. Consequently, operating expenditures rose from \$92.95 per pupil in 1933 to \$113.41 in 1941, an increase of 22%.

In third class districts the number of pupils dropped from 554.2 thousand in 1933 to 495.4 thousand in 1941, a decrease of 10.6%. During the same period operating costs increased \$6 million or 15.1%. The combination of a decrease in school population and an increase in operating expenditures was responsible for a rise in operating costs per pupil from \$72.08 in 1933 to \$92.80 in 1941, an increase of 28.7%.

Declines in pupil attendance and increased expenditures for operations also were responsible for the large increase in per pupil operating costs in fourth class districts. While the number of pupils declined from 638.6 thousand in 1933 to 598.6 in 1941, a decrease of 6.3%, operating expenses rose \$9.3 million or 22.1%. As a result of these factors, per pupil operating costs rose from \$65.69 in 1933 to \$85.54 in 1941, an increase of 30.2%.

#### PER PUPIL INSTRUCTION COSTS—BY CLASSES OF DISTRICT— 1933-1941

Tuition paid by certain districts to other districts for pupils attending schools outside their own residential areas is reported by the paying districts as part of instruction costs. Although relatively unimportant in comparisons of total expenditures, they are quite important, when dealing with per pupil instruction costs by classes of district. Instruction costs per pupil are derived by dividing total costs of instruction by the number of pupils in average daily attendance. Since pupils, for whom tuition is paid, are not in attendance at the schools

of the districts which pay tuition, the inclusion of such payments inflates the cost per pupil. Consequently, the amount of such tuition is eliminated in computing instruction costs per pupil.

Cost of instruction per pupil in attendance for the period 1933-1941 by classes of districts follows:

**Per Pupil Instruction Costs—By Classes of Districts—1933-1941**

School Years	First	Second	Third	Fourth	Average
1933 .....	\$90.37	\$70.67	\$51.64	\$41.44	\$58.11
1934 .....	88.47	63.43	47.87	40.08	55.12
1935 .....	82.82	64.86	49.12	40.91	54.92
1936 .....	84.65	72.83	52.96	43.72	58.48
1937 .....	93.78	74.58	56.81	45.53	62.33
1938 .....	96.13	78.90	58.72	47.36	64.61
1939 .....	94.86	77.12	58.82	48.35	64.45
1940 .....	95.88	80.31	63.61	50.41	67.25
1941 .....	97.52	85.61	65.85	50.50	68.80
Ratio 1941 to 1933 ..	107.9	121.1	127.5	121.9	118.4

During the period covered by the foregoing table, the average over-all per pupil cost of instruction for all districts followed an irregular upward trend rising from \$58.11 in 1933 to \$68.80 in 1941, an increase of 18.4%.

In the two first class districts, the trend of per pupil instruction costs was irregular. After a decline from \$90.37 in 1933 to \$82.82 in 1935, they rose irregularly to \$97.52 in 1941, an increase of 7.9% over 1933.

In second class districts during the period instruction costs followed a much sharper upward trend than in first class districts. After a decline from \$70.67 in 1933 to \$63.43 in 1934, an irregular upward trend carried per pupil instruction costs to \$85.61 in 1941, an increase of 21.1% over 1933.

In third class districts the irregular upward trend of per pupil instruction costs during the period was sharper than in other districts. Following a decline from \$51.64 in 1933 to \$47.87 in 1934, they rose steadily to \$65.85 in 1941, an increase of 27.5%.

In fourth class districts the trend of instruction costs per pupil was steadily upward during the period except for 1934, which shows a reduction to \$40.08 from \$41.44 in 1933. They rose to \$50.50 in 1941, an increase of 21.9% over 1933.

## AVERAGE TEACHERS' SALARY PAYMENTS PER PUPIL—BY CLASSES OF DISTRICTS—1920-1942

The most important factor in the growing costs of instruction is the amount paid for salaries of teachers. The average amounts paid for teachers' salaries per pupil by classes of districts for selected years, prior to 1933, and all years thereafter to 1942 is presented below:

**Average Salary Payments to Teachers Per Pupil—By Classes of Districts—1920-1942**

School Years	First	Second	Third	Fourth	Average
1920 .....	\$36.12	\$36.03	\$29.81	\$27.65	\$30.95
1922 .....	54.30	44.50	35.74	30.71	38.67
1928 .....	80.42	61.88	47.68	38.23	51.99
1932 .....	80.99	67.17	49.02	39.05	54.19
1933 .....	78.65	62.13	44.67	35.38	50.33
1934 .....	77.50	55.90	41.71	34.09	47.89
1935 .....	72.15	56.68	42.46	34.42	47.32
1936 .....	73.87	63.94	45.95	36.48	50.40
1937 .....	81.83	65.56	49.18	37.89	53.65
1938 .....	83.79	68.80	50.45	39.41	55.42
1939 .....	83.33	69.08	51.40	40.12	55.86
1940 .....	84.41	70.69	54.43	41.45	57.65
1941 .....	85.80	74.42	58.92	43.17	60.24
1942 .....	87.19	78.69	61.45	47.92	63.77
Ratio 1942 to 1920 ...	241.4	218.4	206.1	173.3	206.0

Costs per pupil for average teachers' salary payments more than doubled during the 23 year period, 1920-1942, in all classes of districts, except the fourth class. In first class districts these costs rose from \$36.12 in 1920 to \$87.19 in 1942, an increase of 141.4%. In second class districts they rose from \$36.03 in 1920 to \$78.69 in 1942, an increase of 118.4%. In third class districts they rose from \$29.81 in 1920 to \$61.45 in 1942, an increase of 106.1%. In fourth class districts they rose from \$27.65 in 1920 to \$47.92 in 1942, an increase of 73.3%.

The wide variations among the various classes of districts in per pupil costs for average teachers' salary payments are also apparent in the foregoing table. These costs rank in order of the classes, with first class districts ranking highest and fourth class lowest. The margin of difference in these costs has consistently increased during the 23 year period, 1920-1942, covered by the foregoing table. In

1920 costs per pupil for average teachers' salaries in fourth class districts were \$27.65; those in third class districts exceeded fourth class districts by \$2.16 or 7.8%; those in second class districts were \$8.38 or 30.3% more than in fourth class districts; and in first class districts, they were \$8.47 or 30.6% greater than in fourth class districts.

By 1942 these costs in fourth class districts rose to \$47.92; those in third class districts exceeded fourth class districts by \$13.53 or 28.2%; those in second class districts were \$30.77 or 64.2% more than in fourth class districts; and in the first class districts they were \$39.27 or 81.9% greater than those in fourth class districts.

### INSTRUCTION COSTS PER PUPIL AND TEACHERS' SALARY PAYMENTS PER PUPIL—ALL DISTRICTS

The importance of teachers' salary payments in costs of instruction is apparent from the following table, which relates over-all instruction costs per pupil of all classes of districts to costs per pupil for teachers' salary payments for selected years, prior to 1933, and all years thereafter to 1942:

School Years	Per Pupil Instruction Costs Amount	Per Pupil Payments for Teachers' Salaries <sup>1</sup>	
		Amount	Percent of Instruction Costs
1920 .....	\$37.86 <sup>2</sup>	\$30.95	81.7
1922 .....	46.88 <sup>2</sup>	38.67	82.5
1928 .....	61.49	51.99	84.6
1932 .....	63.97	54.19	84.7
1933 .....	58.11	50.33	86.6
1934 .....	55.12	47.89	86.9
1935 .....	54.92	47.32	86.2
1936 .....	58.48	50.40	86.2
1937 .....	62.33	53.65	86.1
1938 .....	64.61	55.42	85.8
1939 .....	64.45	55.86	86.7
1940 .....	67.25	57.65	85.7
1941 .....	68.80	60.24	87.6
1942 .....	74.51	63.77	85.6
Ratio 1942 to 1920	196.8	206.0	
Ratio 1942 to 1928	121.2	122.7	

<sup>1</sup> Excludes salaries for supervisors, principals, principals' clerks, and assistants.

<sup>2</sup> Includes tuition paid to other districts—amounts not reported for these years. For other years tuition payments are excluded.

Fluctuations in payments for teachers' salaries is closely reflected in instruction costs, as shown in the foregoing table. Except for the

period prior to 1933, payments for teachers' salaries per pupil in attendance were consistently above 85% of instruction costs per pupil. It is also to be noted that, while instruction costs per pupil rose from \$61.49 in 1928 to \$74.51 in 1942, an increase of \$13.02 or 21.2%, costs for teachers' salaries per pupil rose from \$51.99 in 1928 to \$63.77 in 1942, an increase of \$11.78 or 22.6%.

**INSTRUCTION COSTS PER PUPIL AND TEACHERS' SALARY PAYMENTS PER PUPIL—BY CLASSES OF DISTRICTS—1920-1942**

The consistently growing costs for instruction and for teachers' salaries per pupil in first class districts is shown below, for selected years prior to 1933, and all years thereafter to 1942:

School Years	First Class Districts		
	Instruction Costs Per Pupil Amount	Payments for Teachers' Salaries Per Pupil <sup>1</sup> Amount	Percent of Instruction Costs
1920 .....	\$43.63 <sup>2</sup>	\$36.12	82.8
1922 .....	62.93 <sup>2</sup>	54.30	86.3
1928 .....	93.08	80.42	86.4
1932 .....	93.98	80.99	86.3
1933 .....	90.37	78.65	87.0
1934 .....	88.47	77.50	87.6
1935 .....	82.82	72.15	87.1
1936 .....	84.65	73.87	87.3
1937 .....	93.78	81.83	87.3
1938 .....	96.13	83.79	87.2
1939 .....	94.86	83.33	87.8
1940 .....	95.88	84.41	88.0
1941 .....	97.52	85.80	88.0
1942 .....	99.17	87.19	87.9
Ratio 1942 to 1920	227.3	241.4	
Ratio 1942 to 1928	106.5	108.4	

<sup>1</sup> Excludes salaries for supervisors, principals, principals' clerks, and assistants.

<sup>2</sup> Includes tuition paid to other districts—amounts not reported for these years. For other years tuition payments are excluded.

Except for 1920, payments for teachers' salaries per pupil in first class districts during the 23 year period, 1920-1942, were above 86% of instruction costs per pupil. While instruction costs rose from \$93.08 per pupil in 1928 to \$99.17 in 1942, an increase of \$6.09 or 6.5% teachers' salaries per pupil rose from \$80.42 in 1928 to \$87.19 in 1942, an increase of \$6.77 or 8.4%, despite a decline in pupil at-

tendance from 309 thousand in 1928 to 296 thousand in 1942, a decrease of 4.3%.

The relation of costs of instruction per pupil to teachers' salary payments per pupil in second class districts for selected years prior to 1933, and all years thereafter to 1942 is shown below:

#### Second Class Districts

School Years	Instruction Costs Per Pupil Amount	Payments for Teachers' Salaries Per Pupil	
		Amount	Percent of Instruction Costs
1920	\$43.99 <sup>1</sup>	\$36.02	81.9
1922	52.80 <sup>1</sup>	44.50	84.3
1928	73.25	61.88	84.5
1932	78.39	67.17	85.7
1933	70.67	62.13	87.9
1934	63.43	55.90	88.1
1935	64.86	56.68	87.4
1936	72.83	63.94	87.8
1937	74.58	65.56	87.9
1938	78.90	68.80	87.2
1939	77.12	69.08	89.6
1940	80.31	70.69	88.0
1941	85.61	74.42	86.9
1942	90.41	78.69	87.0
Ratio 1942 to 1920	205.5	218.5	
Ratio 1942 to 1928	123.4	127.2	

<sup>1</sup> Includes tuition paid to other districts—amounts not reported for these years. For other years tuition payments are excluded.

As shown in the foregoing table, payments per pupil for teachers' salaries in second class districts represented less than 85% of instruction costs prior to 1932. Thereafter, they were consistently above 85% and in 1939 represented 89.6% of instruction costs per pupil. This increase was due to higher teacher salary costs per pupil, while other instruction costs per pupil were decreasing. Instruction costs per pupil rose from \$73.25 per pupil in 1928 to \$90.41 in 1942, an increase of \$17.16 or 23.4%. During the same period payments for teachers' salaries per pupil rose from \$61.88 to \$78.69, an increase of \$16.81 or 27.2%, while pupils in attendance rose from 194.6 thousand to 197.4 thousand, an increase of 2.8 thousand pupils or only 1.3%. This increase in number of pupils may be attributed in part



to a reclassification of two third class districts to second class districts in 1932, based on the federal census of 1930.

The relation of costs of instruction per pupil and for teachers' salaries per pupil in third class districts, for selected years prior to 1933 and all years thereafter to 1942, is shown in the following tabulation:

		<b>Third Class Districts</b>		
School Years		Instruction Costs Per Pupil	Payments for Teachers' Salaries Per Pupil	
		Amount	Amount	Percent of Instruction Costs
1920	.....	\$35.97 <sup>1</sup>	\$29.81	82.9
1922	.....	43.16 <sup>1</sup>	35.74	82.8
1928	.....	56.55	47.68	84.3
1932	.....	58.04	49.02	84.5
1933	.....	51.64	44.67	86.5
1934	.....	47.87	41.71	87.1
1935	.....	49.12	42.46	86.4
1936	.....	52.96	45.95	86.8
1937	.....	56.81	49.18	86.6
1938	.....	58.72	50.45	85.9
1939	.....	58.82	51.40	87.4
1940	.....	63.61	54.43	85.6
1941	.....	65.85	58.92	89.5
1942	.....	72.26	61.45	85.0
Ratio 1942 to 1920		200.9	206.1	
Ratio 1942 to 1928		127.8	128.9	

<sup>1</sup> Includes tuition paid to other districts—amounts not reported for these years. For other years tuition payments are excluded.

In third class districts costs for teachers' salaries per pupil prior to 1933 were less than 85% of instruction costs per pupil during the same period. In every year thereafter they represented 85% or more of instruction costs and rose to 89.5% in 1941. While instruction costs per pupil rose from \$56.55 in 1928 to \$72.26 in 1942, an increase of \$15.71 or 27.8%, payments for teachers' salaries per pupil rose from \$47.68 to \$61.45, an increase of \$13.77 or 28.9%. During the same period pupils in attendance rose from 459.9 thousand in 1928 to 494.2 thousand in 1942, an increase of 34.3 thousand pupils, or only 7.2%. Reclassifications of fourth class districts to third class districts, based upon the federal census of 1930 and 1940, were largely responsible for these increases in the number of pupils in third class districts.

Costs of instruction per pupil and for teachers' salaries per pupil in fourth class districts for selected years prior to 1933 and all years thereafter to 1942, are shown below:

**Fourth Class Districts**

School Years	Instruction Costs Per Pupil Amount	Payments for Teachers' Salaries Per Pupil	
		Amount	Percent of Instruction Costs
1920 .....	\$34.36 <sup>1</sup>	\$27.65	80.5
1922 .....	39.24 <sup>1</sup>	30.71	78.3
1928 .....	46.09	38.23	82.9
1932 .....	47.19	39.05	82.8
1933 .....	41.44	35.38	85.4
1934 .....	40.08	34.09	85.1
1935 .....	40.91	34.42	84.1
1936 .....	43.72	36.48	83.4
1937 .....	45.53	37.89	83.2
1938 .....	47.36	39.41	83.2
1939 .....	48.35	40.12	83.0
1940 .....	50.41	41.45	82.2
1941 .....	50.50	43.17	85.5
1942 .....	57.58	47.92	83.2
Ratio 1942 To 1920	167.6	173.3	.....
Ratio 1942 To 1928	124.9	125.3	.....

<sup>1</sup> Includes tuition paid to other districts—amounts not reported for these years. For other years tuition payments are excluded.

Costs for teachers' salaries per pupil in fourth class districts were less than 85% of costs of instruction per pupil during the entire 23 year period, 1920-1942, except in 1933, 1934, and 1941, when they were slightly over 85% of instruction costs per pupil. Instruction costs rose from \$46.09 per pupil in 1928 to \$57.58 in 1942, an increase of \$11.49 or 25%, while payments per pupil for teachers' salaries rose from \$38.23 in 1928 to \$47.92 in 1942, an increase of \$9.69 or 25.3%, despite a decline in pupil attendance from 635.3 thousand in 1928 to 550.9 thousand in 1942, a decrease of 84.4 thousand pupils, or 13.3%, due largely to reclassification of 46 fourth class districts to third class districts in 1932 and 21 fourth class districts to third class districts in 1942.

**COSTS FOR OPERATION AND MAINTENANCE OF PLANT PER PUPIL—BY CLASSES OF DISTRICTS—1920-1942**

Of current operating expenditures, those for operation and maintenance of school plant are second in importance to those for instruction. The variations in these costs per pupil in attendance, for selected years, prior to 1933 and all years thereafter to 1942, are shown in the following table:

School Years	Costs of Operation and Plant Maintenance Per Pupil				Average
	First	Second	Third	Fourth	
1920	\$ 9.65	\$10.53	\$10.03	\$ 6.45	\$ 8.47
1922	9.88	10.87	9.58	6.56	8.59
1928	15.04	15.18	12.30	8.58	11.70
1932	14.44	14.35	10.61	7.32	10.69
1933	12.43	11.95	8.83	6.12	8.97
1934	12.17	11.88	9.08	6.59	9.17
1935	13.29	12.72	9.66	6.98	9.82
1936	14.67	13.73	10.37	7.36	10.57
1937	16.10	14.35	11.20	7.96	11.40
1938	16.50	14.98	11.82	8.62	12.00
1939	16.27	14.87	11.57	8.28	11.72
1940	17.23	15.28	12.47	9.01	12.50
1941	19.25	16.81	13.40	9.41	13.49
1942	19.66	18.22	14.81	10.31	14.57
Ratio 1942 To 1920	203.7	173.0	147.6	159.8	.....

The trend of over-all school plant operation and maintenance costs per pupil was irregularly upwards, rising from \$8.47 in 1920 to \$11.70 in 1928, an increase of 38.1%. Then came a decline to \$8.97 in 1933. Thereafter, these costs rose steadily, except for 1939, to \$14.57 in 1942, an increase of 72% over 1920.

The variations among the various classes of districts in costs for school plant operation and maintenance per pupil are also apparent in the preceding table. During most of the period, 1920-1942, these costs rank in order of the classes, with first class districts ranking highest and fourth class lowest.

The irregular upward trend of these costs per pupil in first class districts was sharper than the over-all trend, rising from \$9.65 in 1920 to \$14.44 in 1932, an increase of 49.6%. Then came a decline to \$12.17 in 1934. Except for a slight decline in 1939, these costs

rose sharply after 1934 to \$19.66 in 1942, an increase of 103.7% over 1920.

In second class districts costs of plant operation and maintenance per pupil rose from \$10.53 in 1920 to \$15.18 in 1928, an increase of 44.2%. They then declined to \$11.88 in 1934. Except for a slight decline in 1939, they rose sharply after 1934 to \$18.22 in 1942, an increase of 73% over 1920.

The irregular upward trend in costs for plant operation and maintenance per pupil in third class districts was not as sharp as in first and second class districts, rising from \$10.03 in 1920 to \$14.81 in 1942, an increase of 47.6%.

The irregular upward trend of these costs per pupil in fourth class districts was about the same as in third class districts, rising from \$6.45 in 1920 to \$10.31 in 1942, an increase of 59.8%.

During the period covered by this survey, while there were sharp increases in costs per pupil, standards were raised substantially in all phases of public education. The shift in school attendance to the secondary grades was a major factor in increased costs. Furthermore, transportation of pupils at the expense of school districts, begun in 1919, has increased rapidly in later years. On the other hand, however, it should be noted that the purchasing power of the dollar has varied substantially during the period. This factor is discussed fully in another section of this survey.

## PART VI

### SUMMARY AND CONCLUSIONS

During the thirty-year period between 1913 and 1942 some 2,500 school districts of the Commonwealth reported total disbursements of about \$4.76 billions. The use of the term "total disbursements of school districts"<sup>1</sup> has definite limitations, because the disbursements, reported annually to the Department of Public Instruction, include certain duplications of payments and do not include certain other items of expenditures. The same limitations apply to reported total receipts. Consequently, this summary of the thirty year survey of the fiscal operations of the school districts of the Commonwealth will be devoted primarily to the survey's analysis of reported operating expenditures and current revenue receipts, which are not subject to the qualifications. Because a detailed breakdown of receipts and expenditures from 1913 to 1919 is not available, this summary will deal only with the period between 1920 and 1942. During this period the school districts of Pennsylvania spent \$4.33 billion or 91 per cent of total disbursements between 1913 and 1942.

In order to relate the effect of changing economic conditions to the financial problems and operations of the school districts, the years between 1920-1942 are grouped in three economic periods. The school years 1920-1922 cover the period which directly reflected the influence of World War I; the years 1923-1932 represent the period of Post World War I Reconstruction; while the school years 1933-1942 represent the Post World War I Depression period.

#### OPERATING EXPENDITURES—1920-1942

Between 1920 and 1942 total operating expenditures increased annually with the exception of the early years of the depression period—1933 to 1937—when operating expenditures declined. By 1942 annual operating expenditures of all districts combined amounted to \$168 million or 2.6 times the \$64.8 million spent in 1920. The average annual operating expenditures of \$132.8 million during the

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<sup>1</sup> See explanation on pages 12 and 13.

1923-1932 period represented an increase of 67.6 percent over the average annual operating expenditures of \$79.2 million during the 1920-1922 period. These expenditures further increased 14.3 percent during the 1933-1942 period over 1923-1932, averaging \$152 million per annum, an increase of 91.9 percent over the 1920-1922 period.

When reduced to a per pupil basis the greatest proportionate increase in operating expenditures occurred in first class school districts, where in 1942 operating expenditures were 129.8 percent greater than in 1920; second class districts had the second highest increase (98.9 percent) during the same period; third class districts were next with an increase of 88.4 percent; while the smallest increase was in fourth class districts, where the 1942 expenditures were 80.8 percent over 1920.

Of total operating expenditures during the 1920-1942 period, costs of instruction constituted 74.5 percent; operation and maintenance of plant, 13.1 percent; and other operating expense, which includes general control, auxiliary agencies, and fixed charges represented 12.4 percent. It is apparent, therefore, that changes in instruction costs materially affected total operating expenditures.

#### **COSTS OF INSTRUCTION—1920-1942**

The trend in instruction costs during the period 1920-1942 followed that of total operating expenditures, each having increased by about 160 percent. The increases in costs of instruction were due to six major factors: increase in total number of pupils; shifts in pupil attendance from elementary to secondary schools, where instruction costs are appreciably higher; proportionately larger increases in numbers of teachers than pupils; increases in teachers' salaries; increases in cost of transportation of pupils to and from schools; and extension of school year in fourth class districts.

Between 1920 and 1942 total public school attendance in the State fluctuated materially. Up to 1933 the trend was continually upward, increasing 42.8 percent from 1,244 thousand in 1920 to 1,777 thousand pupils. After 1933, however, a downward trend set in and by 1942 total attendance was still 23.6 percent greater than in 1920, but it had fallen 13 percent below 1933. Numbers of teachers, however, did not follow the same trend. Between 1920 and 1933 the total number of teachers had increased from 44,862

to 57,104, an increase of 27.3 percent. By 1942 the number of teachers increased further to 57,875 which was 29 percent greater than in 1920 and 1.4 percent greater than in 1933, despite the 13 percent decrease in attendance from 1933 to 1942. This increase in numbers of teachers, despite the decrease in attendance, was due in part to the shift in pupil attendance from elementary to secondary schools where the pupil-teacher ratio is traditionally lower. While total number of pupils was declining continually after 1933, attendance in secondary schools continued upward through 1940, while attendance in elementary schools began its downward trend in 1928.

The increase in total number of pupils was of less significance than either of the other three factors. While total instruction costs between 1920-1942 increased 163 percent, the total number of pupils in average daily attendance increased only 23.6 percent. Consequently, when reduced to a per pupil basis, costs of instruction still show a startling increase of 96.8 percent during this period. First class districts showed the largest increase—127.3 percent—in instruction costs; second class districts showed 105.5 percent; third class districts, 100.9 percent; and fourth class districts, 67.6 percent.

Of the total instruction costs, teachers' salary payments constituted 81 percent for the period 1920-1942. This item was, therefore, the major factor in determining trends in instruction costs. As in the case of operating expenditures and costs of instruction, payments for teachers' salaries also showed continual increases throughout the period, with the exception of the years 1933-1937. The 1942 expenditures for teachers' salaries were 154.7 percent greater than those of 1920. Reduced to a per pupil basis, the increase in salary payments was still 106 percent during the period. As in the case of costs of instruction, the increase in teachers' salary payments, by classes of districts, followed the order of the classes; namely, the largest increase was in first class districts, the smallest in fourth class.

The increases in teachers' salary payments for the four classes of districts are shown in the table which follows:

**Payments for Teachers Salaries**

Class of District	Percentage	Increase—1942 Over 1920
First .....		141.4
Second .....		118.4
Third .....		106.1
Fourth .....		73.3
		<hr/>
Average .....		106.0

Compared with the 106 percent increase in payments for teachers' salaries per pupil for all districts, the numbers of teachers during the period increased only 29 percent, reflecting a substantial increase in the average salary of teachers.

Another factor in the sharp increase in instruction costs during the period was the substantial shift in attendance from primary to secondary schools, as is evidenced by daily attendance in both types of schools in 1942, compared with attendance in 1920. While total average daily attendance in 1942 was 23.6 percent greater than in 1920, elementary attendance was actually 14 percent less and secondary attendance 340.6 percent greater in 1942 than in 1920. In other words, whereas in 1920, 89 percent of the total average daily attendance was in the elementary grades and only 11 percent in the secondary grades, by 1942 elementary attendance constituted only 62 percent of the total, while secondary attendance had risen to 38 percent.

As is pointed out in the surveys of the Philadelphia, Pittsburgh, and Scranton School Districts,<sup>1</sup> the pupil-teacher ratio is normally lower in secondary schools than in elementary schools for educational reasons, requiring a larger number of teachers for a similar number of pupils. It is, therefore, understandable why numbers of teachers increased 29 percent between 1920-1942 compared with an increase in average daily attendance of only 23.6 percent. This proportionately larger increase in numbers of teachers than in pupils resulted in a decrease in the over-all pupil-teacher ratio from 27.7 in 1920 to 26.6 in 1942. The increase in numbers of teachers and the fact that secondary school teachers are required by law to be compensated at a higher

<sup>1</sup> See Reports of Joint State Government Commission, Fiscal Operations and Debt of the School District of Philadelphia 1920-1943, May 10, 1944 Fiscal Operations and Debt of the School District of Pittsburgh 1919-1943, May 11, 1944, and Fiscal Operations and Debt of the School District of Scranton 1919, 1943, May 12, 1944.



rate than elementary school teachers account for a larger portion of the increase in payments for teachers' salaries during the period.

During the same period salaries of elementary and secondary school teachers increased materially. The most noted increase was for elementary school teachers in fourth class districts. Between 1928-1942 the median salaries of elementary teachers rose 61.8 percent in fourth class districts, 17 percent in third class districts, 14.3 percent in second class districts, and 6.9 percent in first class districts. During the same period the median salaries of secondary school teachers also increased, but to a lesser degree; in fact, in fourth class districts the median salaries of secondary school teachers showed a slight decrease.

#### PLANT OPERATION AND MAINTENANCE—1920-1942

Plant operation and maintenance costs, the second largest item of operating expenditures, also showed steady increases throughout the period, 1920-1942, with the exception of the early depression years, 1933-1937. However, the total increase was not in the same proportion as increases in costs of instruction. The 1942 expenditures for plant operation and maintenance were 112.2 percent greater than in 1920, compared with an increase of 163 percent in instruction costs and 160 percent in total operating expenditures. On a per pupil basis, the increase for plant operation and maintenance was only 72 percent during the same period, compared with an increase of 96.8 percent in per pupil instruction costs and 109.7 percent in per pupil operating expenditures.

As with other expenditure items, the largest proportionate increase for plant operation and maintenance was in first class districts, with second class districts next largest. While instruction costs of third class districts showed a larger proportionate increase than fourth class, plant operation and maintenance costs increased at a greater rate in fourth class districts than in third class districts. This indicates that fourth class districts were spending a proportionately larger share of their total operating expenditures than other classes for plant operation and maintenance than for instruction in 1942, when compared with 1920.

The percentage increase on the per pupil basis for operation and maintenance by the four classes of districts is shown below:

<b>Operation and Maintenance Increases</b>	
Class of District	Percentage Increase—1942 Over 1920
First .....	103.7
Second .....	73.0
Third .....	47.6
Fourth .....	59.8
Average .....	72.0

### CAPITAL OUTLAYS—1920-1942

Compared with almost constant increases in all operating expenditures, capital outlays showed a great deal of fluctuation. Of the total of \$481 million reported spent for capital outlays between 1920-1942, \$311.6 million or 64.8 percent was spent in the 1923-1932 decade. This represented the period of rapid expansion in pupil attendance and school plant. This large expenditure for capital outlays in that decade, financed mainly by bond issues, accounted for the substantial increases in net debt and debt service charges during the succeeding period (1933-1942).

Of the total capital outlays during this entire twenty-three year period, first class districts spent 29 percent; fourth class 27.3 percent; third class districts 26.7 percent; and second class districts 17 percent. It is interesting to note the relationship of total capital outlays to pupil attendance by classes of districts. Whereas first and second class districts spent during the period, 1920 to 1942 a greater percentage of the total capital outlays than their proportionate percentage of the total pupil attendance in the same period, third and fourth spent a smaller percentage of the total capital outlays during the period than their proportionate percentage of total pupil attendance. These relationships are shown below:

<b>Capital Outlays by Each Class of District</b>		
Class of District	Percentage of Total Capital Outlays—1920-1942	Percentage of 1920-1942 Average Daily Attendance
First .....	29	19.91
Second .....	17	12.57
Third .....	26.7	29.59
Fourth .....	27.3	37.93

While it is not possible to ascertain from the published reports of the Department of Public Instruction exactly what proportion of capital outlays were financed by sale of long term bonds and what proportion from current revenues, it is estimated that about 33 per cent of total capital outlays of all school districts were financed from current revenues during the 1928-1942 period. The percentage of capital outlays financed from current revenues by the various classes of districts is shown below:

<b>Capital Outlays Financed from Current Revenues</b>	
Class of District	Percentage
First .....	24.6
Second .....	17.3
Third .....	29.3
Fourth .....	51.8

#### **BONDED INDEBTEDNESS—1920-1942**

As stated previously, the major portion of the expenditures for capital outlays was financed from the sale of long term bonds. The published statistical reports of the Department of Public Instruction do not show the bonds issued and redeemed prior to 1928. Consequently, it is impossible to ascertain exactly how much was realized from the sale of bonds during the entire period. Nor does a comparison of the growth of the indebtedness give an exact picture, since a large portion of the bonds, issued in the period, 1920-1942, were redeemed during that same period. In fact, from 1928 to 1942, the only years for which figures of bonds issued and redeemed are available, the amount of bonds issued was almost as large as the amount of bonds retired during the same years. It is, nevertheless, apparent that the large amount spent for capital outlays resulted in a material increase in the bonded indebtedness from 1920 to 1942.

The total gross bonded debt at the end of 1920 was \$79.6 million, whereas in 1942 it was \$246.4 million, an increase of about 210 per cent. The net bonded indebtedness rose from \$71 million in 1920 to \$201.6 million at the end of 1942, an increase of 184 per cent. Of the net bonded indebtedness, outstanding at the end of 1942, 30.8 per cent was in first class districts, 23 per cent in second, 30 per cent in third, and 16.2 per cent in fourth class districts. Relating these percentages to the percentage of pupil attendance in the four classes of

districts, as shown in the preceding table, it will be noted that in first and second class districts there is a proportionately larger net bonded indebtedness than in pupil attendance.

Debt service charges, as reported in the published statistical reports of the Department of Public Instruction, exclude debt service charges paid out of special or pledged taxes. On the other hand they include repayments of temporary loans. Consequently, the statistics of debt service charges must be used with these limitations in mind. The effect of the 210 percent increase in gross bonded indebtedness between 1920 and 1942 was reflected in an increase in debt service charges of 284 percent during the same years.

#### REVENUES—1920-1942

To finance the increasing operating expenditures and debt service charges, items usually financed from current revenues, it was naturally necessary to increase the current revenues of all school districts. The average annual revenue receipts during 1923-1932 were 84.3 percent greater than the average annual revenue receipts between 1920-1922. During 1933-1942, the average annual receipts were increased another 10.7 percent over the preceding decade, an increase of 104 percent over the average annual revenue receipts of the 1920-1922 period.

The two major sources of local school revenues are local taxes and state and federal grants. Both these sources showed major increases between 1920 and 1942. State and federal grants, however, showed much sharper percentage increases than did receipts from taxes. Total taxes collected in 1942 were 151.8 percent greater than those of 1920, while state and federal grants increased 330 percent during the period. This indicates that, although school districts still absorbed a major part of public school expenditures from their local revenues, the growing importance of and greater reliance on state and federal grants are apparent.

While operating expenditures and costs of instruction increased about 160 percent between 1920 and 1942, current tax revenues increased 152 percent and state grants 330 percent. In fact, in 1920 only 16.7 percent of total school current operating expenditures came from state and federal grants and the remaining 83.3 percent from local sources, by 1942 state and federal grants accounted for 29.3 per-

cent of total school current operating expenditures and local sources only 70.7 percent. Thus it is apparent that state and federal grants bore a much greater share of the increase in operating costs than did local revenues. This was particularly true of third and fourth class school districts.

The greater reliance of third and fourth class districts on state and federal grants than on local revenues is indicated by the fact that, while on a per pupil basis, federal and state grants for all districts increased 247.3 percent in 1942 over 1920, the increases in third and fourth class districts were 288.6 percent and 283.6 percent respectively. In first and second class districts the increases in state and federal grants per pupil were only 162.8 percent and 145 percent respectively during the same period.

At the same time the increase in tax receipts per pupil were 103.7 percent for all school districts, but only 77.5 percent for third class districts and 73.5 percent for fourth class districts, whereas, in first and second class districts the increases were 136.6 percent and 118.9 percent respectively. In other words, while the percentage increases in federal and state grants were greater than percentage increases in tax receipts in all classes of districts, the difference in first and second class districts was not as material as it was in third and fourth class districts.

The increased tax collections were due both to increases in assessed valuations and increased levies. On a per pupil basis, assessed valuations for all school districts increased by 6 percent between 1920 and 1942. Consequently, in order to produce during the same period the increase of 103.7 percent in tax receipts on a per pupil basis, it was necessary to increase the average millage or tax rate by 76.7 percent, from an average of 10.75 mills in 1920 to 19 mills in 1942. The fourth class was the only one where assessed valuations per pupil were reduced, valuations in this class being 16 percent less in 1942 than in 1920. Consequently, in order to produce even the comparatively smaller increase in local tax receipts, it was necessary to raise the average millage by about 50 percent.

Third class districts showed an increase in valuations per pupil of only one percent between 1920 and 1942 and an increased average

millage of 60 percent. Although first and second class districts, by comparison with the third and fourth class districts, showed material increases in average assessed valuation per pupil between 1920-1942 (23 percent in the first class and 19.6 percent in the second class), their average tax millage or rate was also increased at a greater degree than third and fourth class districts. Between 1920-1942 the average millage for first class districts rose from 6 mills to 11.75 mills, an increase of 95.8 percent, while in second class districts it rose from 10 mills to 17.6 mills, an increase of 76 percent.

It is apparent from the above discussion that increased public school expenditures were borne to a much larger degree by the state government than by local resources in all districts, but to a much greater degree in third and fourth class districts than in first and second class districts. Despite larger state and federal grants, third and fourth class districts were, however, required to make substantial increases in their local tax rates, due in part to the fact that assessed valuations either remained constant or declined. First and second class districts, despite increased assessed valuations, were required to raise tax rates to an even greater extent.

It should be pointed out that any conclusions on comparative assessed valuations must be made with caution. Increased assessed valuations in first two classes of districts were probably due in great part to the general migration during the period from rural to the urban areas. Conversely, declines in assessed valuations in third and fourth class districts were probably due to this general migration. These declines in assessed valuations assumes special significance, when it is realized that 75.7 per cent of the fourth class districts and 53.7 per cent of the third class districts received their major state grants on the basis of "true valuation per teacher."<sup>1</sup>

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<sup>1</sup> In first class districts the "true valuation per teacher" for 1941-1942 was between \$300 thousand and \$350 thousand. Of the 20 second class districts, only 5 districts or 25 percent had a "true valuation per teacher" less than \$200 thousand, none less than \$126 thousand. Consequently, there is very little likelihood that these two classes of districts could qualify for a larger percentage under the "true valuation per teacher" formula without drastic reductions in assessed valuations.

## CONCLUSIONS

The most natural consideration in determining trends of school costs is the number of pupils attending school. Consequently, increased school costs would be expected because of larger attendance in 1942 than in 1920, even if all other factors remained constant. However, while the number of pupils attending school in 1942 had increased only 23.6 per cent over 1920, total operating expenditures actually increased 160 per cent. Consequently, it is apparent that other factors than increase in attendance must have played a more important part in increasing total costs.

The other factors, which increased costs, in the order of their importance may be listed as follows: (1) increases in average teachers' salaries, (2) a shift of greater proportion of all pupils and teachers to secondary schools, where teachers' salaries are required by law to be higher, (3) a greater increase in number of teachers than in number of pupils in the years of rising attendance and a less than proportionate decrease in numbers of teachers than in pupils in the years of declining attendance since 1933.

While statistics of over-all state school costs do not lend themselves to as detailed an analysis as do those of individual school districts, it is nevertheless apparent from the broad outline, derived from the over-all figures, that conditions prevailing in certain individual districts (Philadelphia, Pittsburgh, Scranton, and Eleven Selected School Districts), studied and reported on by the Joint State Government Commission<sup>1</sup> in May, 1944, are more or less typical of those in all school districts of the state. Consequently, it is possible to apply some of the conclusions contained in those reports to the school districts of the State as a whole. For example, it is impossible from the published statistical reports to ascertain to what degree school districts in Pennsylvania, as a whole, were able to balance their annual revenues and expenditures over this entire period, but, since the combined receipts and expenditure trends of all school districts followed very closely those of the individual districts studied, it may be assumed that, generally speaking, school districts did not encounter

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<sup>1</sup> See Reports of Joint State Government Commission, Fiscal Operations and Debt of the School District of Philadelphia 1920-1943, May 10, 1944 Fiscal Operations and Debt of the School District of Pittsburgh 1919-1943, May 11, 1944, and Fiscal Operations and Debt of the School District of Scranton 1919, 1943, May 12, 1944, Fiscal Operations and Debts of Eleven Selected School Districts 1920-1943 May 13, 1944,

material difficulties in balancing their financial operations, although to obtain that balance the larger districts, despite increased assessed valuations, had to increase their tax levies to a greater degree than did the smaller districts.

It should also be pointed out, however, that the percentage increases in expenditures of the smaller districts were not as great as in the larger districts and that smaller districts relied to a greater degree on the state grants than did the larger districts.

Another important observation that should be made is that in the smaller districts, particularly in the fourth class, the pupil-teacher ratio had been constantly lower than in the larger classes of districts. It is impossible to ascertain positively the reason for that difference. It may be due to two factors: (1) the smaller districts may not have a sufficient number of pupils to maintain higher pupil-teacher ratios; and (2) the basis on which state grants are allocated may encourage a low pupil-teacher ratio in the smaller districts.<sup>1</sup> However, it should be noted that while between 1920 and 1942 first, second, and third class districts showed decreases in their pupil-teacher ratios, fourth class districts showed an increase.

The pupil-teacher ratios for 1920 and 1942 for the four classes of districts are shown below:

<b>Pupil-Teacher Ratios</b>			
Class of District	1920	1942	Change
First .....	32.93	29.88	— 9.3%
Second .....	28.70	25.77	—10.2%
Third .....	36.01	26.56	—26.2%
Fourth .....	22.64	25.38	+12.1%

It will be noted that, despite the decrease in pupil-teacher ratios in the larger school districts and the increase in the fourth class districts, the ratio for fourth class districts in 1942 was still below those of the other classes.

The decrease in pupil-teacher ratios, as stated earlier, was occasioned by two factors: first, the increase in the number of secondary school pupils, where a lower pupil-teacher ratio traditionally prevails; and second the greater increase in numbers of teachers than in pupils

<sup>1</sup> A district may employ any number of teachers without limitation.



during the period of rising attendance and a smaller decrease in numbers of teachers than in pupils during the period of declining attendance.

Since a large number of the fourth class districts do not operate their own secondary schools, the first reason for the decrease in pupil-teacher ratios would not apply to those districts. This may account, in part, for the increased ratio in fourth class districts, compared with the decrease in other classes.

Looking at the future, it appears probable that Pennsylvania's school districts, as a whole, should be able to maintain and improve upon their present educational standards and services under their present revenue structure. This is borne out by two facts revealed in this survey of financial operations of the school districts.

First is the fact that teachers' salaries have been increased substantially during this 23 year period, particularly in the areas where salaries were so low as to make it impossible to retain qualified personnel. This especially applies to elementary teachers in fourth class districts where, as late as 1928, their median annual salaries were only \$892, compared with \$1,427 in third class districts, \$1,628 in second class, and \$2,085 in first class districts. By 1942, while disparities between districts still existed, due primarily to differences in costs of living, the disparity had become much less, with annual median salaries in 1942 of \$1,443 for elementary teachers in fourth class districts, \$1,670 in third class, \$1,860 in second class, and \$2,229 in first class districts.

It should also be pointed out that the so-called "cost of living" increase, granted by the General Assembly to teachers for the 1943-1945 biennium, will further reduce the gap between the median salaries of these districts. It may be pointed out also that with the "cost of living" increase, average teachers' salaries in the Commonwealth, in terms of the purchasing power of the dollar in 1944 are the highest in the history of the Commonwealth.

The second consideration with regard to the future relates to the school plant. In fourth class districts the growth in the movement

toward consolidation of small schools is apparent from the fact that, while in 1920 68 per cent of all school buildings were of "one room" type, by 1942 this number had decreased to 44 per cent. In fact, between 1911—when the program for granting financial aid in order to encourage school consolidations was originated—and 1942, a total of 6,393 "one room" schools had been closed.

Between 1920 and 1942 school districts of the Commonwealth expended \$481 million for capital outlays, consisting of additions and improvements to the school plant and equipment. Of this amount \$311.6 million or 64.8 per cent was spent between 1923-1932 and \$131.8 million or 27.4 per cent between 1933 and 1942. While these facts are not conclusive as to the physical condition of the school plants of particular districts, it is apparent, from these data, in conjunction with the steady decline in school attendance throughout the Commonwealth since 1933 and the expectation of a continuation of that decline over the years, that future expansion of school plant can for some years be largely confined to replacement and modernization of obsolete buildings, particularly the "one room" schools in the rural areas.

It may be said, therefore, that during the past quarter of a century the school district plant and personnel have been materially improved; that average teachers' salaries have been substantially increased over the years; that, with the exception of some areas, where a comparatively small percentage of pupils are located, it should be possible for school districts to think in terms of greater emphasis upon quality and standards of teaching and services rather than upon increases in number of teachers or expansion of plant and other facilities, and to maintain a balance in their fiscal operations without increases in revenues, as enrollment continues to decline, as a result of the Commonwealth's attainment of a mature and stabilized population and a seasoned industrial economy.



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